ORDER NO.VM0304018C8

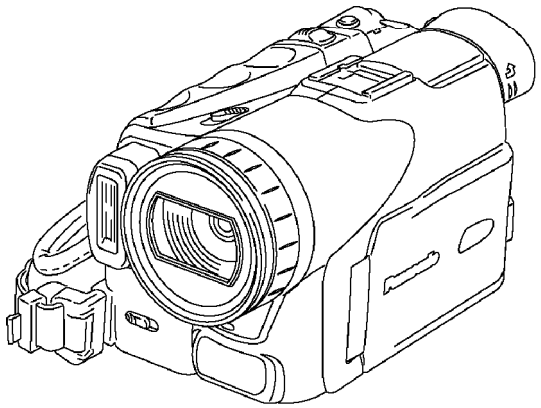
Service Manual

Digital Video Camera/Recorder

Panasonic Mini DV PAL USB MultiMediaCard™ SD

NV-GS70EG / NV-GS70EGM / NV-GS70B / NV-GS70EN / NV-GS70A / NV-GS70ENT

A-MECHANISM



SPECIFICATIONS

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Digital Video Camera

ITEM	SPECIFICATION	ITEM	SPECIFICATION
POWER	Source: DC 7.9 / 7.2 V Consumption: Recording 3.3 W (When using Viewfinder) 4.2 W (When using LCD Monitor)	STANDARD ILLUMINATION	1,400 lx
		MINIMUM REQUIRED ILLUMINATION	1 lx (Colour Night View Mode)
RECORDING FORMAT	Mini DV (Consumer-use Digital Video SD Format)	USB / Mini System Ë	Card reader / writer function, USB 2.0 compliant (maximum 12Mbps) No copyright protection support / Mini System editing terminal
TAPE USED	6.35 mm digital video tape		
RECORDING / PLAYBACK TIME	SP mode: 80 min. with DVM80 LP mode: 120 min. with DVM80	DIGITAL INTERFACE	DV Input/Output Terminal (IEEE1394, 4-pin)
CAMERA	Filter Diameter: 37.0 mm	MICROPHONE	Stereo
	Zoom: 10:1 Power Zoom	SPEAKER	1 round speaker ¢20 mm
	Monitor: 2.5-inch LCD	OPERATING TEMPERATURE	0 - 40 °C
	Lens: Auto Iris, F1.8, Focal Length; 2.45 - 24.5 mm Macro (Full Range AF)		
	Image Sensor: 1/6-inch CCD Image Sensor	OPERATING HUMIDITY	10 - 80 %
	Viewfinder: Colour Electronic Viewfinder		
VIDEO	Recording System: Digital Component	WEIGHT	Approx. 490 g (without Battery and DV Cassette) Approx. 590 g (with VGA-DU14 and DVM60)
	Television System: CCIR; 625 Lines, 50 Fields PAL Colour Signal	DIMENSIONS	Approx. 71 (W) x 77 (H) x 132 (D) mm
	Video Output Level: 1.0 Vp-p, 75Ω S-Video Output Level: Y Output; 1.0 Vp-p, 75Ω C Output; 0.3 Vp-p, 75Ω Video Input Level: 1.0 Vp-p, 75Ω S-Video Input Level: Y Input; 1.0 Vp-p, 75Ω C Input; 0.3 Vp-p, 75Ω	STANDARD ACCESSORIES	1 pc. AC Adaptor 1 pc. Battery Pack Unit 1 pc. DC Cable 1 pc. AC Cord 1 pc. AV Cable 1 pc. S Cable 1 pc. Remote Controller 1 pc. Bottom-type Battery 1 pc. Head Cleaner 1 pc. Hood Cap Unit 1 pc. Driver Soft 1 pc. USB Connection Cable 1 pc. SD Card 1 pc. Shoulder Belt 1 pc. Universal Remote Controller
AUDIO	Recording System: PCM Digital Recording 16 bit (48 kHz/2 ch) 12 bit (32 kHz/4 ch)		
	Audio Output Level (Line): 316 mV, 600Ω Audio Input Level (Line): 316 mV, 10 kΩ or more Mic Input: Mic sensitivity -50dB(0dB=1V/Pa,1kHz) (Stereo Mini Jack)		
CARD MEMORY FUNCTIONS	Recording Media: SD Memory Card, MultiMediaCard Image Compression: JPEG Video Compression: MPEG4 Still Image Size: Mega-pixel Recording; 1536 X1152 (1.7 million pixels) VGA Recording; 640 X 480	SOLDER	This model use lead free solder (PbF).

Weight and dimensions are approximate values.
Specifications may change without prior notice.

Panasonic

1. INTRODUCTION

1.1. INTRODUCTION

Note 1:

1) This service manual does not contain the following information, because of the impossibility of sevicing at component level.

1. Schematic Diagram, Block Diagram and C.B.A. layout of Main C.B.A./ Sub C.B.A.

2. Parts List for individual parts of Main C.B.A./ Sub C.B.A.

3. Exploded View and Parts List for individual parts of Mechanism Unit.

2) The following category is/are recycle module part. Please send it/them to Central Repair

Center.
***Main C.B.A. (VEP03G39B)**
***Sub C.B.A. (VEP23584B)**

When a part replacement is required for repairing each Main C.B.A. and/ or Mechanism block, replace the assembly parts.
(Main C.B.A., Sub C.B.A. and/ or Mechanism Unit)
The following circuits are contained in Main C.B.A.

1. Main Connection Circuit
2. Drive Circuit
3. Video 1 Circuit
4. Video 2 Circuit
5. Control Circuit
6. Ex Input Circuit
7. LCD Circuit
8. Head/ Rec Amp Circuit
9. Power Circuit

The following circuits are contained in Sub C.B.A.

1. Sub Connection Circuit
2. Process Circuit
3. DSC Circuit
4. Lens Drive Circuit
5. Sensor Circuit

1.2. ABOUT LEAD FREE SOLDER (PbF)

Distinction of PbF PCB: PCBs (manufactured) using lead free solder will have a PdF stamp on the PCB.

Caution:

- Pb free solder has a higher melting point than standard solder, Typically the melting point is 50-70°F (30-40°C) higher. Please use a high temperature soldering iron. In case of soldering iron with temperature control, please set it to 700±20°F (370±10°C).
- Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C).

When soldering or unsoldering, please completely remove all of the solder on the pins or solder area, and be sure to heat the soldering points with the Pb free solder until it melts enough.

2. CAUTION FOR AC CORD (VJA0940 TYPE)

2.1. INFORMATION FOR YOUR SAFETY

IMPORTANT
Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

WARNING

To reduce the risk of fire or shock hazard, do not expose this equipment to rain or moisture.

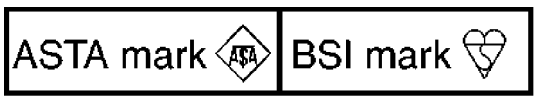
CAUTION

To reduce the risk of fire or shock hazard and annoying interference, use the recommended accessories only.

FOR YOUR SAFETY
DO NOT REMOVE THE OUTER COVER
To prevent electric shock, do not remove the cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

2.2. CAUTION FOR AC MAINS LEAD

For your safety, please read the following text carefully.
This appliance is supplied with a moulded three-pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amperes and it is approved by ASTA or BSI to BS1362
Check for the ASRA mark or the BSI mark on the body of the fuse.



If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.
If the fitted moulded plug is unsuitable for the socket outlet in your home then the fuse should be removed and the plug cut off and disposed of safety.
There is a danger of severe electrical shock if the cut off plug is inserted into any 13-ampere socket.
If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt, please consult a qualified electrician.

2.2.1. Important

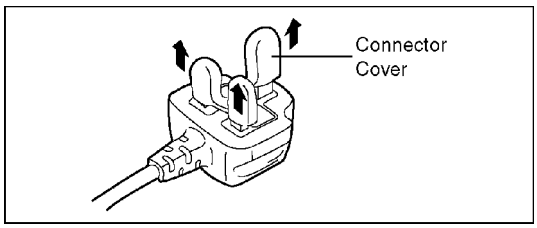
The wires in this mains lead are coloured in accordance with the following code:

Blue	**Neutral**
Brown	**Live**

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.
Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol.

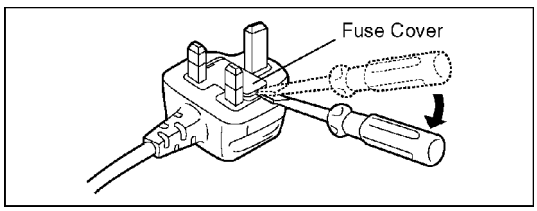
2.2.2. Before use

remove the Connector Cover as follows.

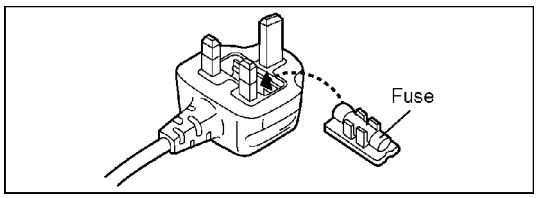


2.2.3. How to replace the Fuse

1. Remove the Fuse Cover with a screwdriver.



2. Replace the fuse and attach the Fuse cover.



3. SERVICE CAUTION

3.1. EEPROM DATA FOR SPARE PARTS OF THE MAIN C.B.A.

When the Main C.B.A. is replaced, the fixed and average data must be changed by Tatsujin kit according to the Movie Camera's suffix.
Then, confirm and/or adjust the VTR and Camera section one by one.

3.2. SERVICE EXTENSION CABLES.

This models is required the following extension cables for all connections.

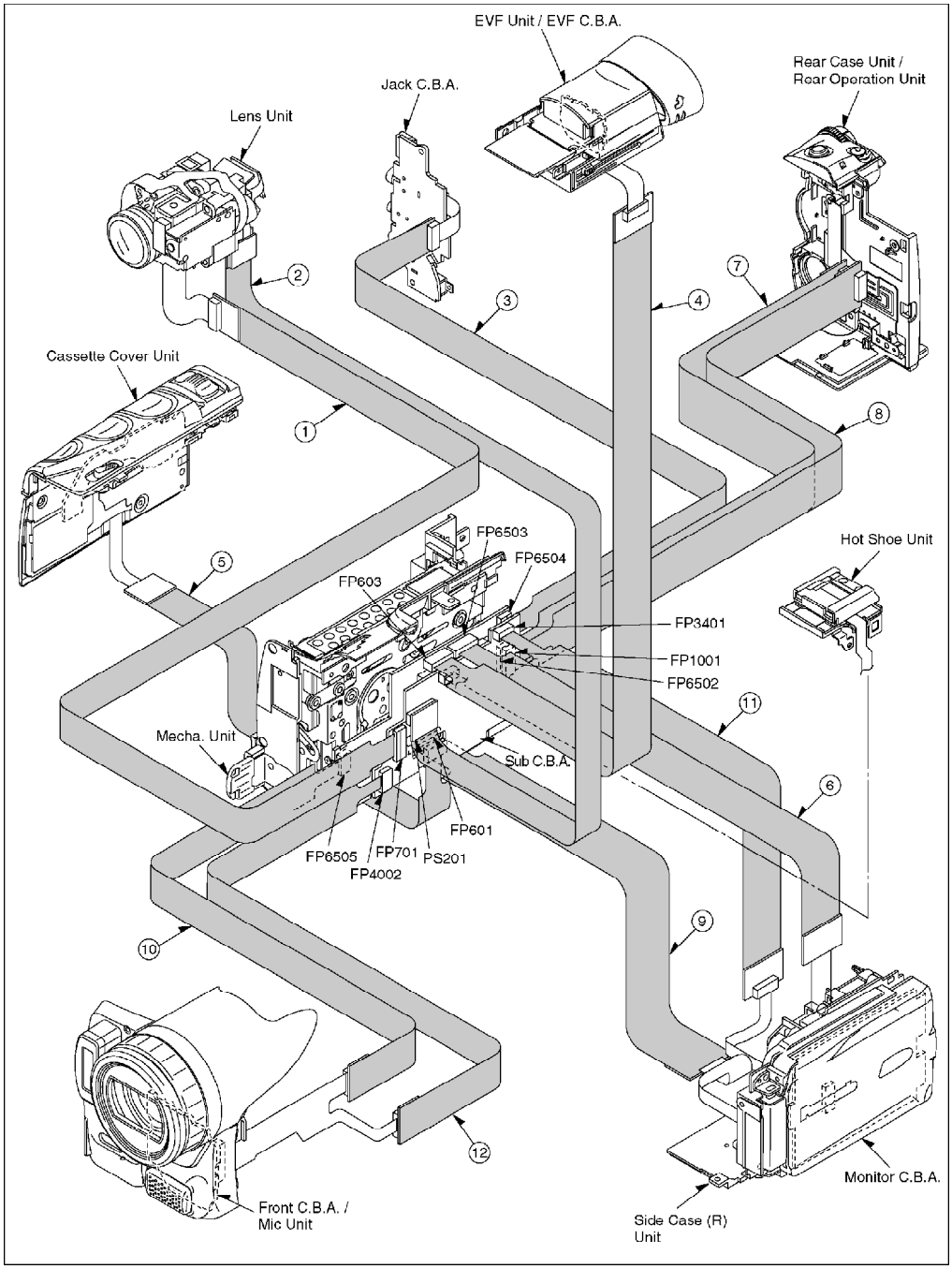
Note 1:

Use the following extension cables when checking or adjusting individual circuit boards except module Parts.
(Main C.B.A. and Sub C.B.A.)

Ref.	Part No.	Pin	Part Name	Connection				Q'ty	Remarks
(1)	VFK1575C3320	33	Flat Cable	FP701	(Sub)	-	Lens Unit	1	as NV-DCF1
(2)	VFK1453	40	Flat Cable	PS201	(Main)	-	PP201(CCD)	1	as NV-DS7
(3)	VFK1575C3320	33	Flat Cable	FP6504	(Main)	-	FP6201(Jack)	1	as NV-DCF1
(4)	VFK1286	16	Flat Cable	FP603	(Main)	-	FP801(EVF)	1	as NV-DP1
(5)	VFK1442	21	Flat Cable	FP6501	(Main)	-	FP6301(Side L)	1	as NV-DS7
(6)	VFK1443	18	Flat Cable	FP6503	(Main)	-	VTR Operation	1	as NV-DS7
(7)	VFK1284	24	Flat Cable	FP6502	(Main)	-	Rear Operation	1	as NV-DP1
(8)	VFK1364	14	Flat Cable	FP1001	(Main)	-	Battery Catcher	1	as NV-DS5
(9)	VFK1492	26	Flat Cable	FP601	(Main)	-	FP903(Monitor)	1	as NV-DS9
(10)	VFK1442	21	Flat Cable	FP6505	(Main)	-	Front Flex.	1	as NV-DS7
(11)	VFK1440	10	Flat Cable	FP3401	(Sub)	-	FP6202(SD Holder)	1	as NV-DS7
(12)	VFK1440	10	Flat Cable	FP4002	(Sub)	-	Front Flex.	1	as NV-DS7

How to use extension cables.

Fig. T1-1



3.3. LOCATION FOR SPARE CONNECTORS OF THE MAIN C.B.A.& SUB C.B.A.

3.3.1. MAIN C.B.A.

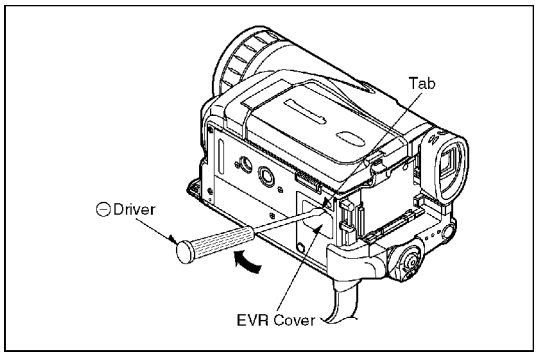
3.3.2. SUB C.B.A.

4. PREPARATION FOR ELECTRICAL ADJUSTMENT

1. Unlock the locking tab and remove the EVR connector as shown in Fig. E1.

2. Then connect the following cables as shown in Fig. E2.

Fig. E1



Part No.	Part Name	Q'ty	Remarks
VFK1395	232C(M3.5)I/F Cable	1	
VFK1308E	EVR Measuring Board	1	
VFK1309	EVR Connector Board	1	
VFK1317 or VFK1511	30 Pin Flat Cable	2	200mm Type 300mm Type
VJA0941	DC Output Cable	1	For AC Adaptor
VFK1164TAR37	Step up Ring	1	For Collimator
VFK1714	Connection Adaptor (30pin)	1	
VFK1763	Connection Adaptor (60-30pin)		

Fig. E2

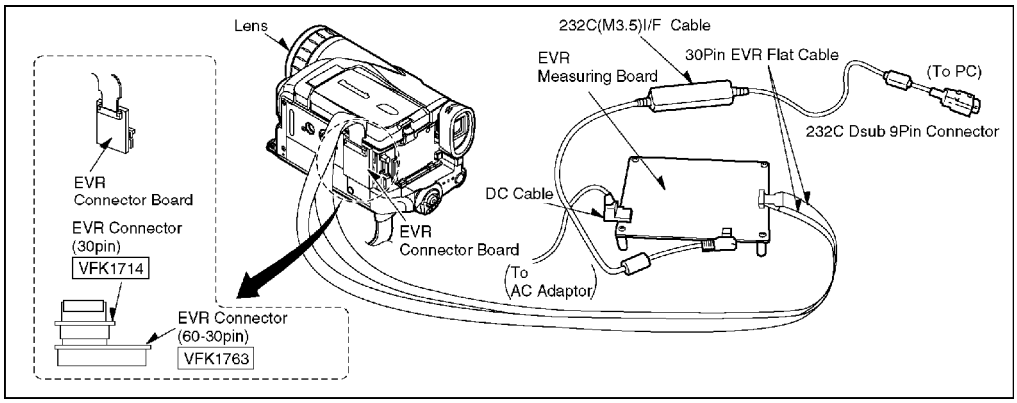
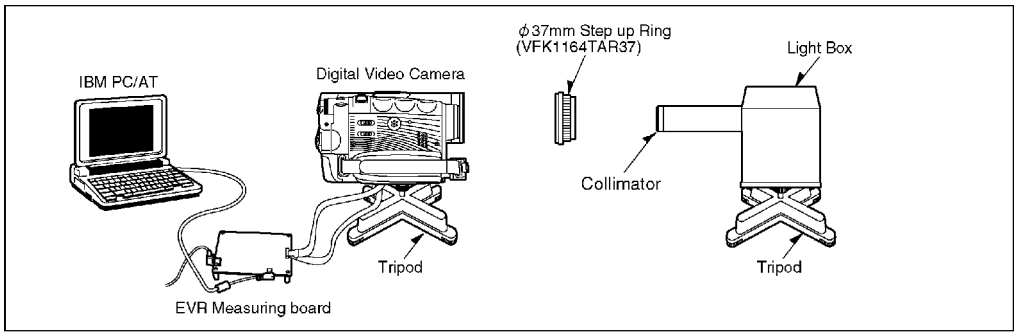


Fig. E3

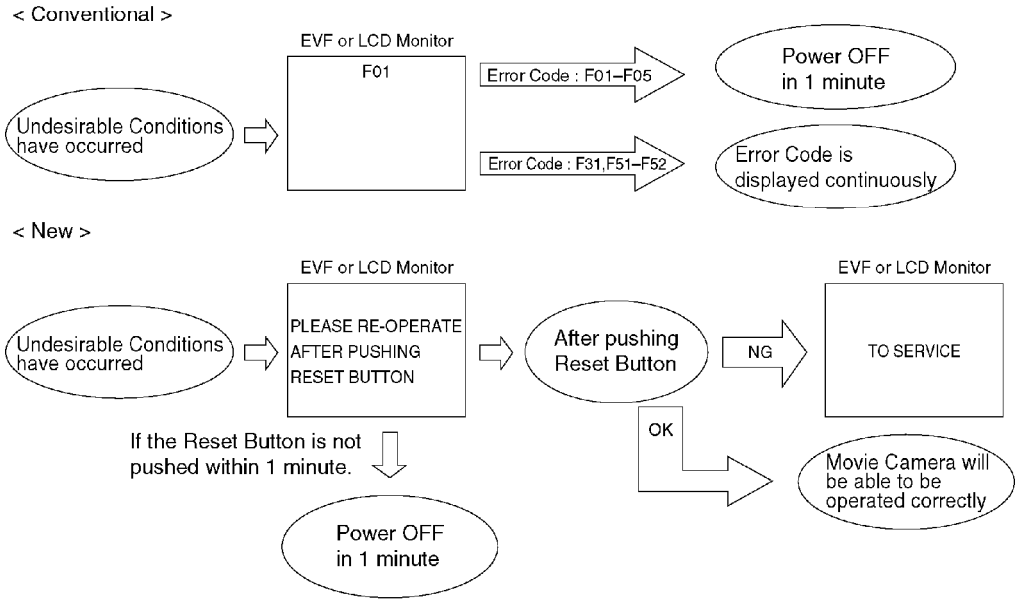


5. SERVICE MODE

5.1. New Error Code Display

Conventionally, the error code has been displayed automatically on the EVF or LCD Monitor when undesirable conditions have occurred. With the New Error Code Display, the error code

has not been displayed automatically as follows except some error codesF31(Data Transmission Error), U10(Dew) and U11(Head Clogging).


< Conventional >
EVF or LCD Monitor
F01
Undesirable Conditions have occurred
Error Code : F01–F05
Power OFF in 1 minute
Error Code : F31,F51–F52
Error Code is displayed continuously
< New >
EVF or LCD Monitor
PLEASE RE-OPERATE AFTER PUSHING RESET BUTTON
Undesirable Conditions have occurred
After pushing Reset Button
NG
EVF or LCD Monitor
TO SERVICE
OK
Movie Camera will be able to be operated correctly
If the Reset Button is not pushed within 1 minute.
Power OFF in 1 minute

Note:

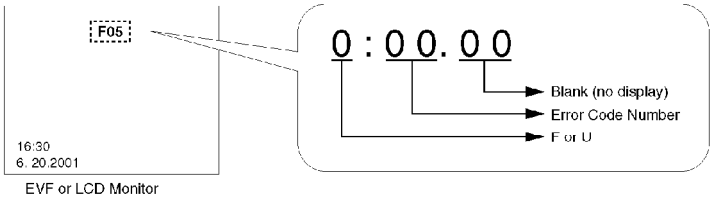
1. **The only some error codes F31, U10 and U11 has displayed automatically on the EVF or LCD monitor as usual.**
2. **The Power LED also has been flashed for 1 min. when undesirable conditions have occurred.(See below)**

5.2. Viewing Error Code

When displaying the Error Code on the EVF or LCD Monitor, push the FADE/STOP and REC START/PAUSE buttons simultaneously for more 3 seconds.

Note:

When the cassette tape is inserted, this operation will not be worked.



EVF or LCD Monitor

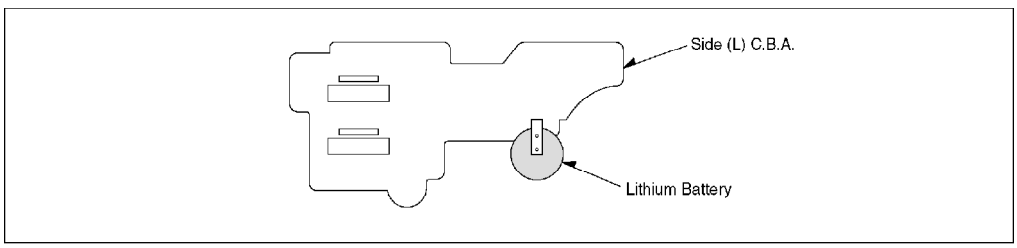
DISPLAY	CONDITION	POWER OFF TIMING / POWER LED FLASHING TIMING
F01	T-Reel Lock	After 1 minute flashing the LED
F02	S-Reel Lock	After 1 minute flashing the LED
F03	Unloading Lock	After 1 minute flashing the LED
F04	Loading Lock	After 1 minute flashing the LED
F05	Cylinder Lock	After 1 minute flashing the LED
F31	Data Transmission Error	Not turning OFF
F51	Zoom Motor Lock	Not turnig OFF Power LED is flashed at 1 Hz timing
F52	Focus Motor Lock	Not turnig OFF Power LED is flashed at 1 Hz timing
U10	Dew Detection	After 18 seconds flashing the LED Power LED is flashed at 1 Hz timing
U11	Head Clogging	Not turning OFF

6. HOW TO REPLACE THE LITHIUM BATTERY (PROCEDURE)

1. Remove the Side Case (L) C.B.A.. (Refer to Disassembly Procedures.)

2. Unsolder the Lithium Battery “ML920S/F9D” and then replace the new one. (See Fig. B1.)

Fig. B1



Note:
The lithium battery is a critical component. (Type No.: ML920S/F9D Manufactured by Panasonic.)
It must never be subjected to excessive heat or discharge.
It must therefore only be fitted in equipment designed specifically for its use.
Replacement batteries must be of the same type and manufacture.
They must be fitted in the same manner and location as the original battery, with the correct polarity contacts observed.
Do not attempt to re-charge the old battery or re-use it for any other purpose.
It should be disposed of in waste products destined for burial rather than incineration.

CAUTION
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the equipment manufacturer.
Discard used batteries according to manufacturer's instructions.

PRECAUTION
Le fait de remplacer incorrectement la pile peut présenter des risques d'explosion.
Remplacer la pile uniquement par une pile identique ou de type équivalent recommandée par le fabricant. Se débarrasser des piles usagées conformément aux instructions du fabricant.

VORSICHT
Bei einer falsch eingesetzten Batterie besteht Explosionsgefahr. Nur mit einer vom Hersteller empfohlenen Batterie vom gleichen Typ ersetzen.
Verbrauchte Batterien beim Fachhändler oder einer Sammelstelle für Sonderstoffe abliefern.

VARNING
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

ADVARSEL!
Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning má kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

7. ADJUSTMENT PROCEDURES

7.1. DISASSEMBLE FLOW CHART

This flow chart indicates the disassembly steps the cabinet parts, C.B.A. and Mecha. Unit in order to access to be serviced. When reinstalling, perform the steps in the reverse order.

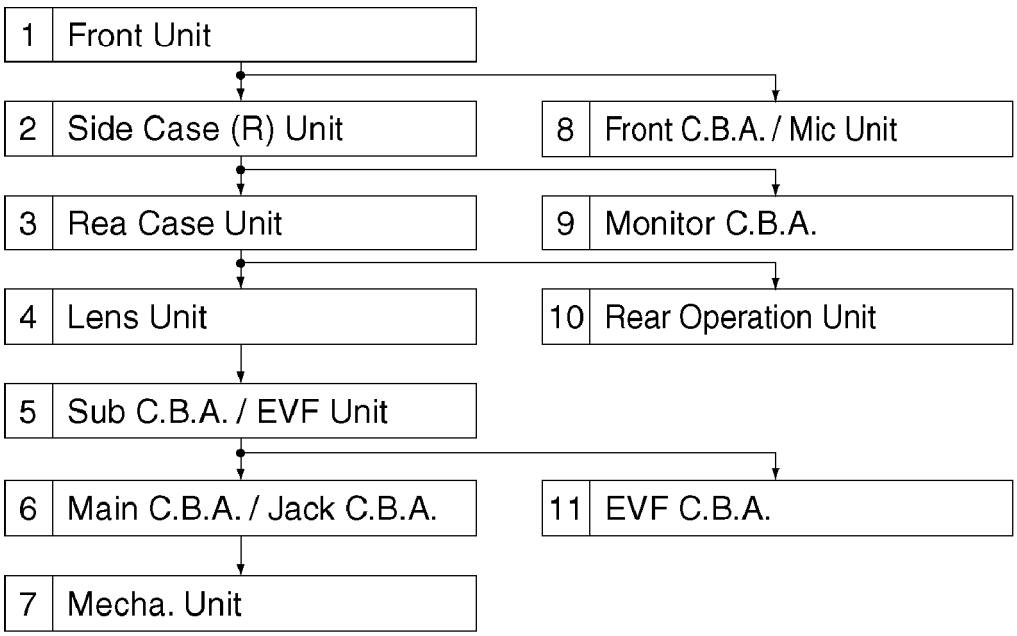
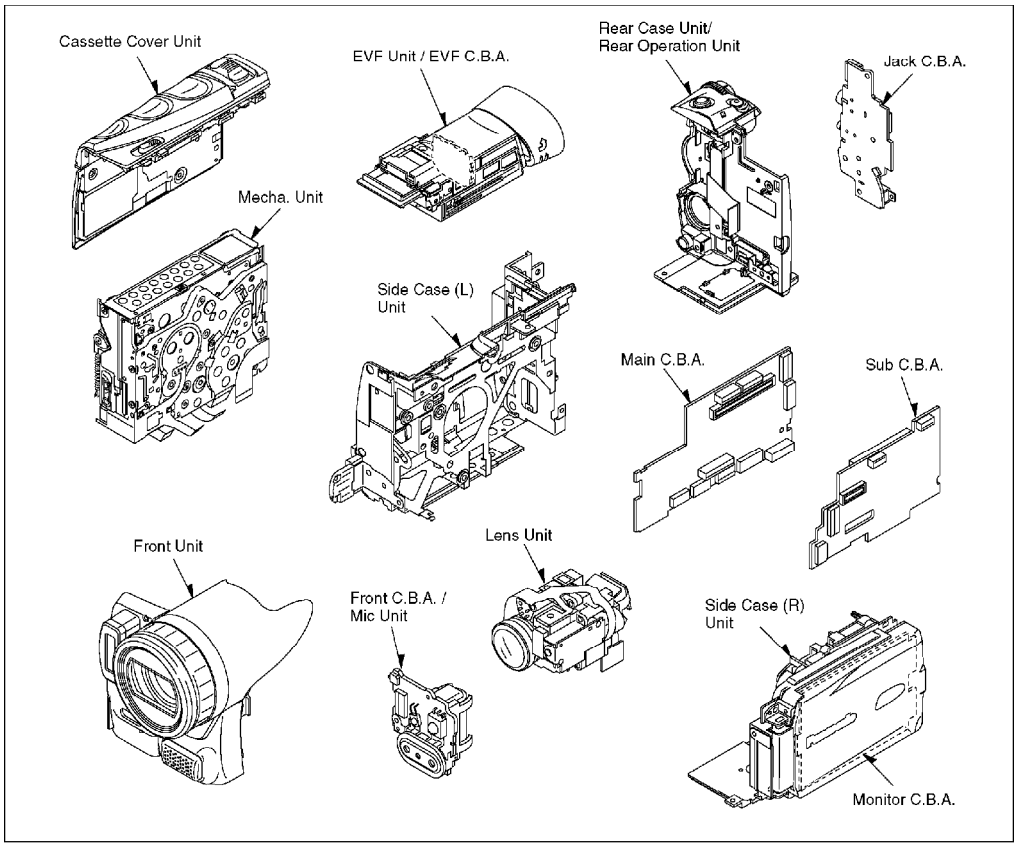

1 Front Unit
2 Side Case (R) Unit
3 Rea Case Unit
4 Lens Unit
5 Sub C.B.A. / EVF Unit
6 Main C.B.A. / Jack C.B.A.
7 Mecha. Unit
8 Front C.B.A. / Mic Unit
9 Monitor C.B.A.
10 Rear Operation Unit
11 EVF C.B.A.

Fig. F1



7.2. DISASSEMBLY PROCEDURES

Flow-Chart for Disassembly Procedure

No.	Item / Part	Fig.	Removal (Screw,Connector,Flex. & Other)
1	Front Case Unit	Fig. D2	It Pushes 1 and it Removes Grip Belt Piece.
		Fig. D3	1-Screw (A), 1-Screw (B), 1-Screw (C)
		Fig. D4	1-Screw (D) 1-Connector FP4801 Front Case Unit
2	Side Case (R) Unit / LCD Unit	Fig. D5	2-Screws (E)
		Fig. D6	2-Screws (F), 1-Screw (G)
		Fig. D7	1-Screw (H) 3-Connectors FP601, FP3401, FP6503 Side Case (R) Unit / LCD Unit

No.	Item / Part	Fig.	Removal (Screw,Connector,Flex. & Other)
3	Rear Case Unit	Fig. D8	1-Screw (I), 1-Screw (J), 1-Screw (K), 1-Screw (L)
		Fig. D9	1-Screw (M)
		Fig. D10	2-Connectors FP1001, FP6502 Rear Case Unit
4	Lens Unit	Fig. D11	1-Screw (N) 2-Connectors FP701, PS201 Lens Unit
5	Sub C.B.A. / EVF Unit	Fig. D12	2-Connectors FP3401, FP4002 Sub C.B.A. 3-Screws (O) 1-Connector FP603 EVF Unit
6	Main C.B.A.	Fig. D13	1-Screw (P) 7-Connectors FP2201, FP2202, FP2203, FP2204, FP5001, FP6501, FP6504 Main C.B.A.
7	Jack C.B.A.	Fig. D14	2-Screws (Q) 1-Connector FP6201 Jack C.B.A.
8	Mecha. Unit	Fig. D15	Cassette Cover Open 3-Screws (R) Mecha. Unit
9	Front C.B.A.	Fig. D16	discharge disposal It moves Flash to the direction of the arrow 2-Screws (S) 2-Connectors FP6501, FP7002 Front C.B.A.

No.	Item / Part	Fig.	Removal (Screw,Connector,Flex. & Other)
10	Monitor C.B.A.	Fig. D17	2-Screws (T)
		Fig. D18	3-Screws (U) Rear Cover
		Fig. D19	2-Screws (V) Side Case (R) Unit
		Fig. D20	2-Screws (W) 8-Tabs LCD Case (Upper) Unit 1-Connector FP903 LCD Hinge Unit
		Fig. D21	LCD Case (Lower)
		Fig. D22	1-Connector FP901 2-Solder Portion 2-Tabs Monitor C.B.A.
11	EVF C.B.A.	Fig. D23	1-Screw (X), 1-Screw (Y) Hot Shoe Unit
		Fig. D24	2-Screws (Z) 2-Slide Pies Slide Frame
		Fig. D25	2-Screws (a) EVF Hinge Unit
		Fig. D26	6-Tabs View ADJ. Unit EVF Case (Upper) / EVF Case (Lower)
		Fig. D27	3-Tabs Lens Polarization Seet Hold / Lens Polarization Seet
		Fig. D28	3-Tabs EVF C.B.A.

Fig. D1

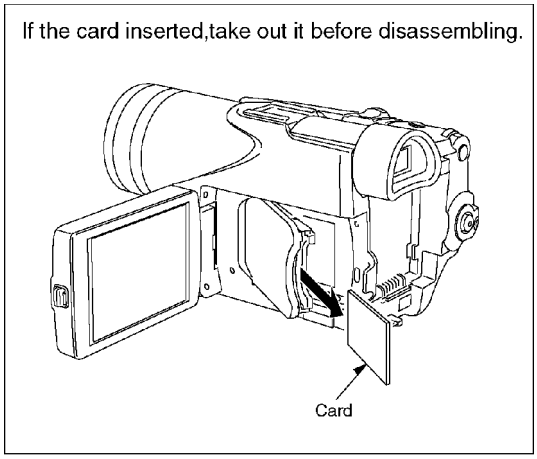

If the card inserted,take out it before disassembling.
Card

Fig. D2

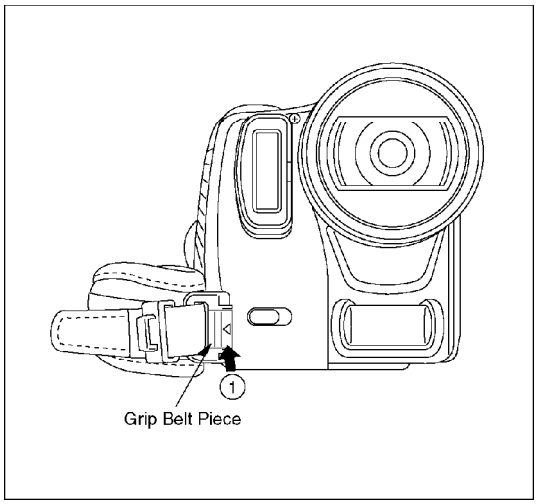

1
Grip Belt Piece

Fig. D3

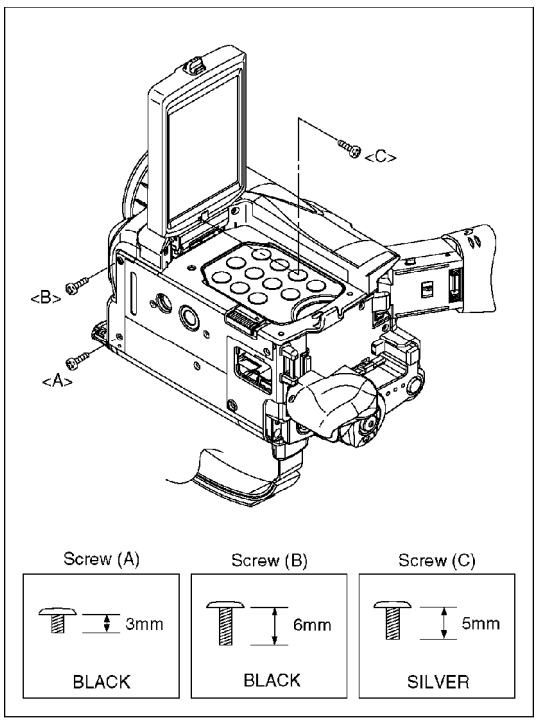

<C>
<B>
<A>
Screw (A)
3mm
BLACK
Screw (B)
6mm
BLACK
Screw (C)
5mm
SILVER

Fig. D4

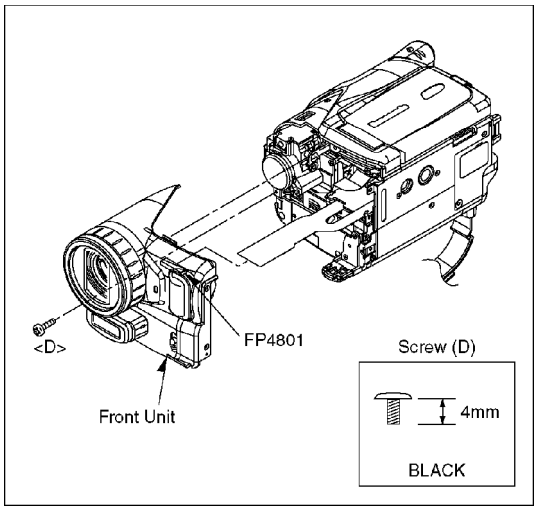


Fig. D5

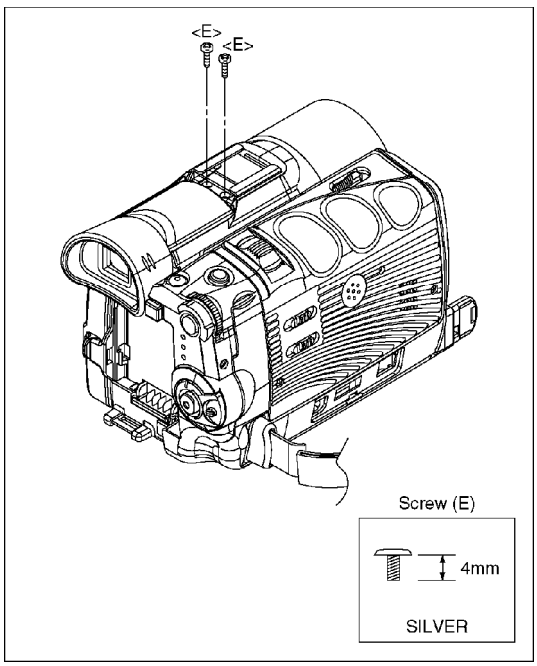


Fig. D6

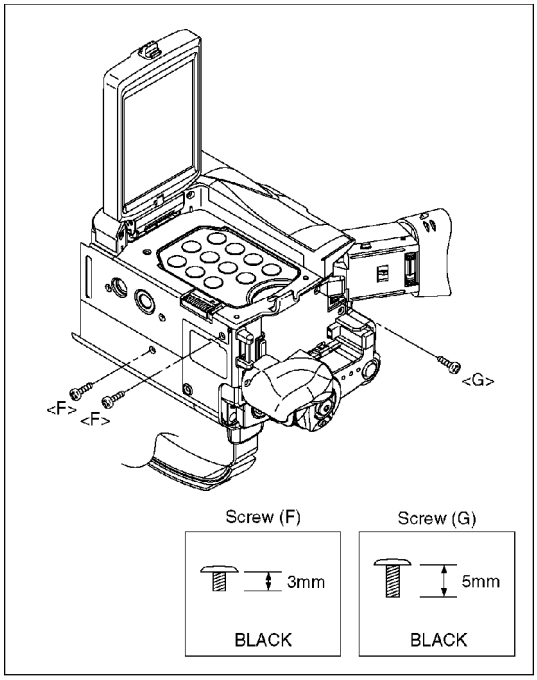

<F>
<F>
<G>
Screw (F)
3mm
BLACK
Screw (G)
5mm
BLACK

Fig. D7

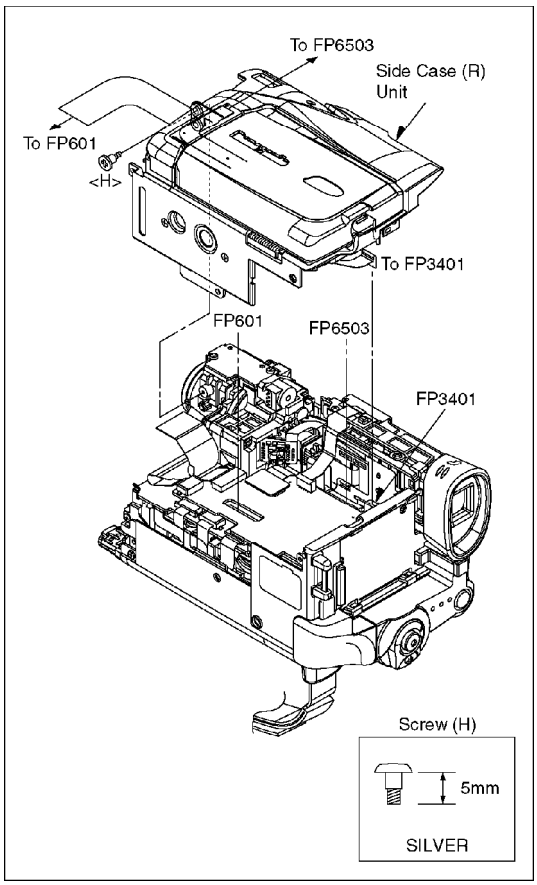

To FP6503
Side Case (R) Unit
To FP601
<H>
To FP3401
FP601
FP6503
FP3401
Screw (H)
5mm
SILVER

Fig. D8

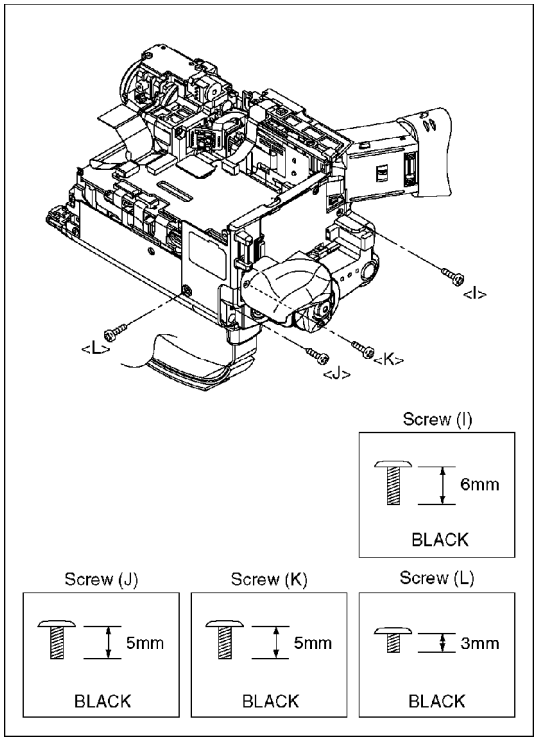


Fig. D9

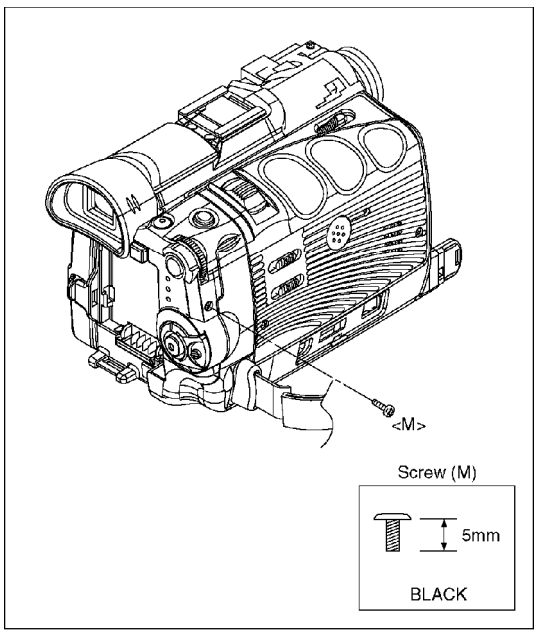


Fig. D10

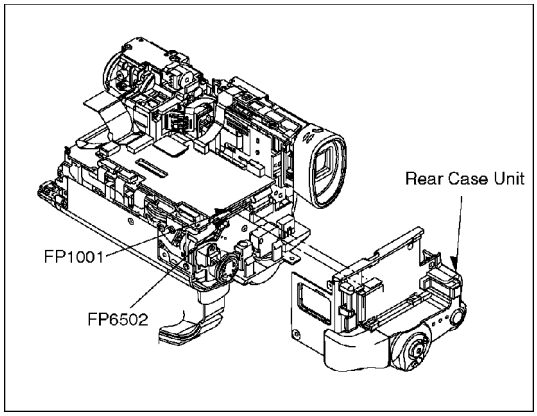


Fig. D11

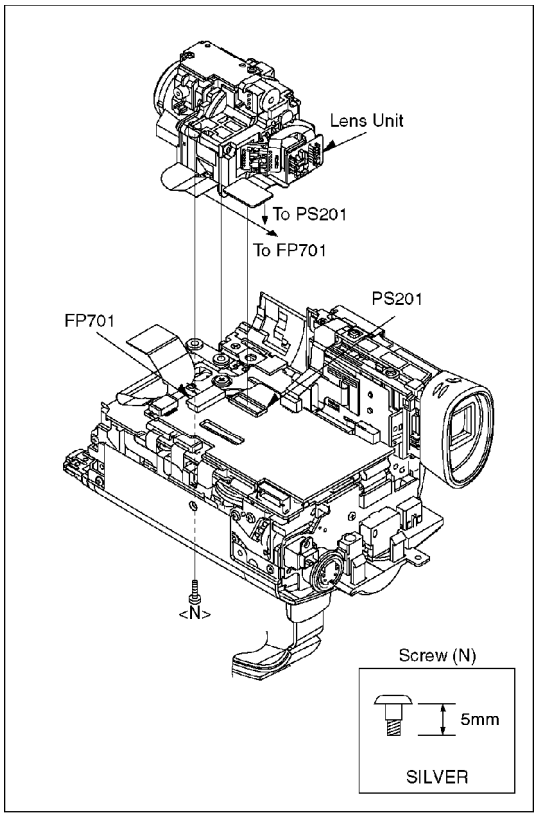


Fig. D12

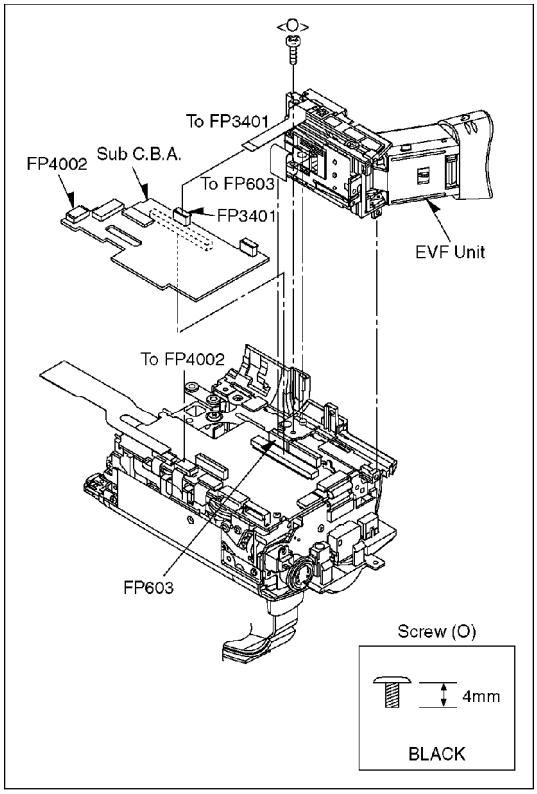


Fig. D13

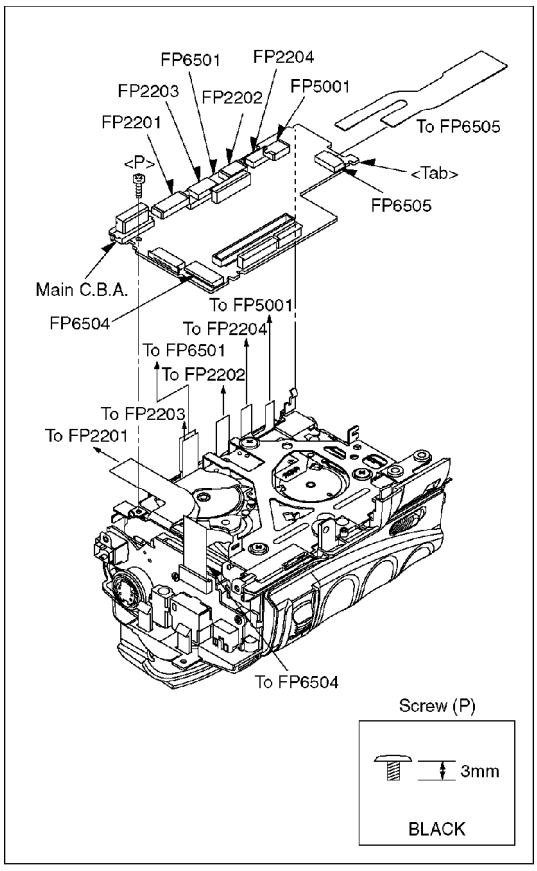


Fig. D14

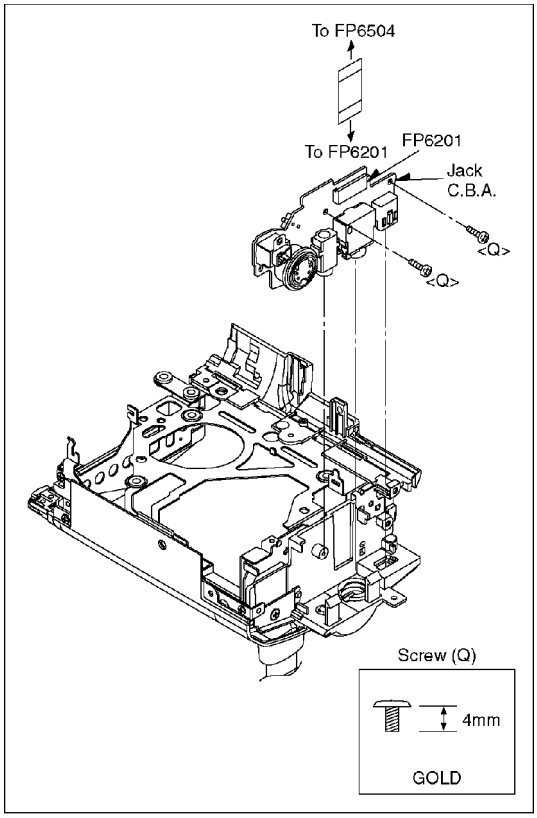


Fig. D15

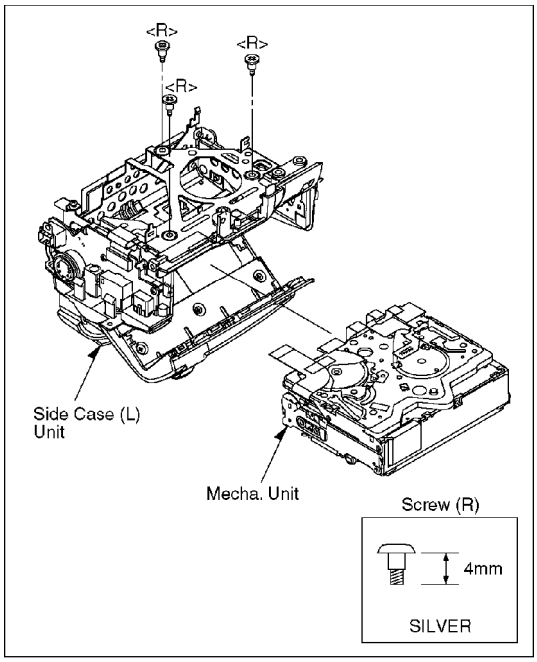


Fig. D16

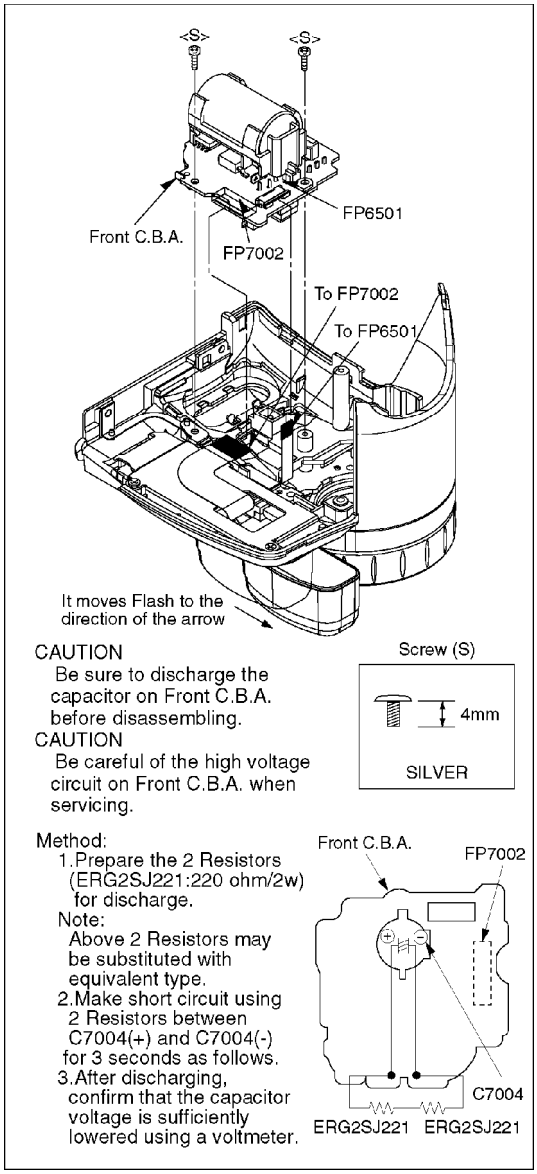

<S>
<S>
FP6501
Front C.B.A.
FP7002
To FP7002
To FP6501
It moves Flash to the direction of the arrow
CAUTION
Be sure to discharge the capacitor on Front C.B.A. before disassembling.
CAUTION
Be careful of the high voltage circuit on Front C.B.A. when servicing.
Screw (S)
4mm
SILVER
Method:
1.Prepare the 2 Resistors (ERG2SJ221:220 ohm/2w) for discharge.
Note:
Above 2 Resistors may be substituted with equivalent type.
2.Make short circuit using 2 Resistors between C7004(+) and C7004(-) for 3 seconds as follows.
3.After discharging, confirm that the capacitor voltage is sufficiently lowered using a voltmeter.
Front C.B.A.
FP7002
C7004
ERG2SJ221
ERG2SJ221

Fig. D17

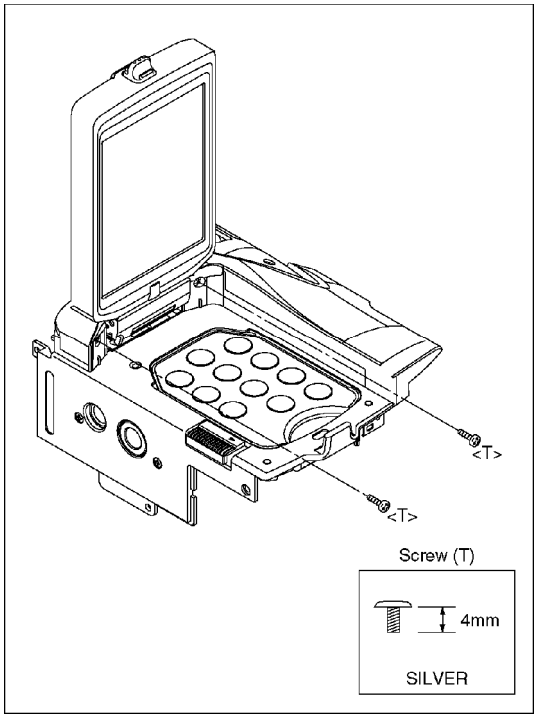


Fig. D18

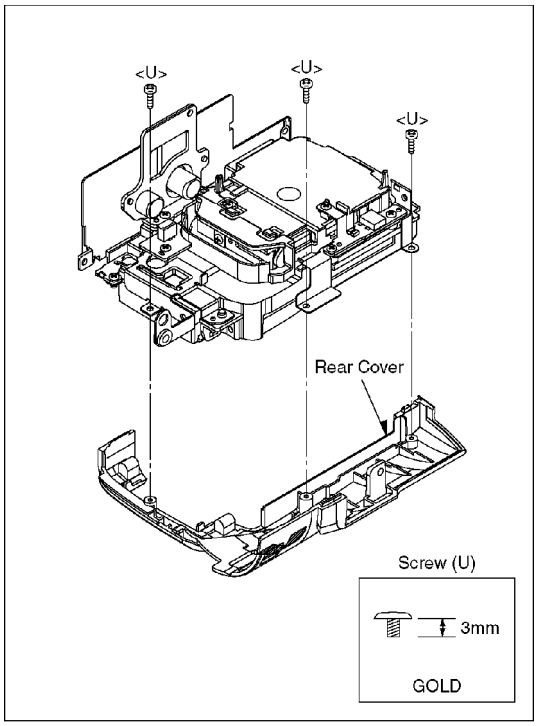


Fig. D19

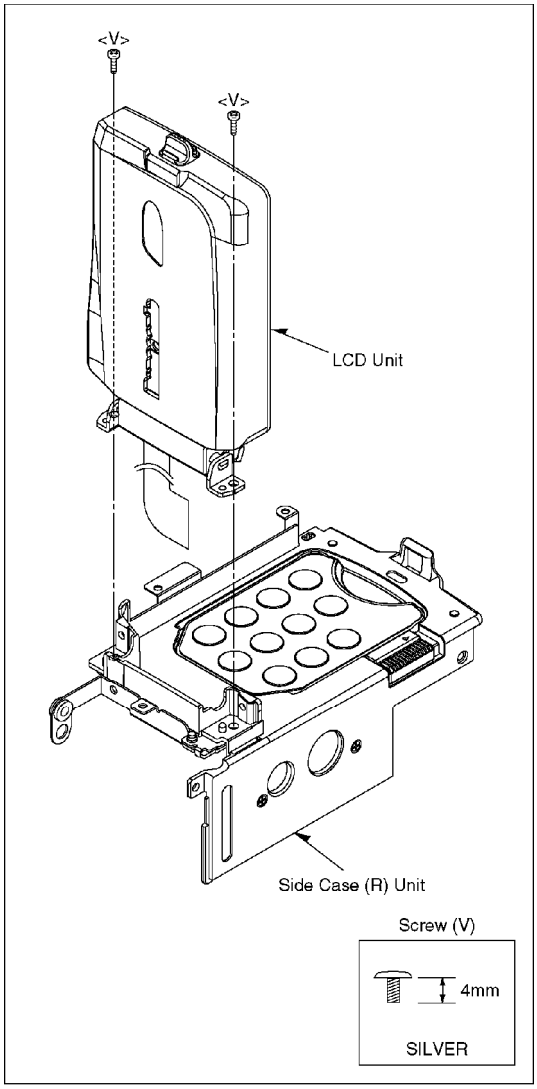


Fig. D20

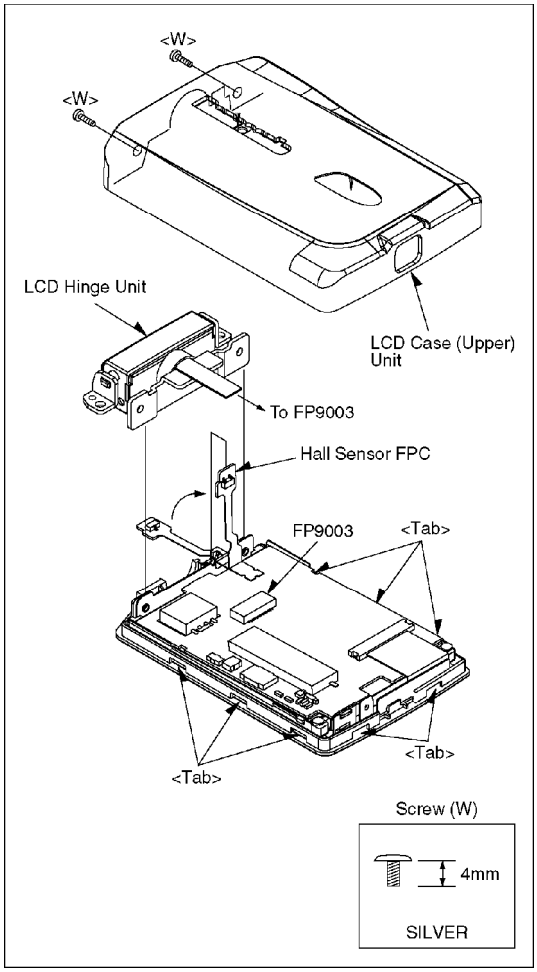


Fig. D21

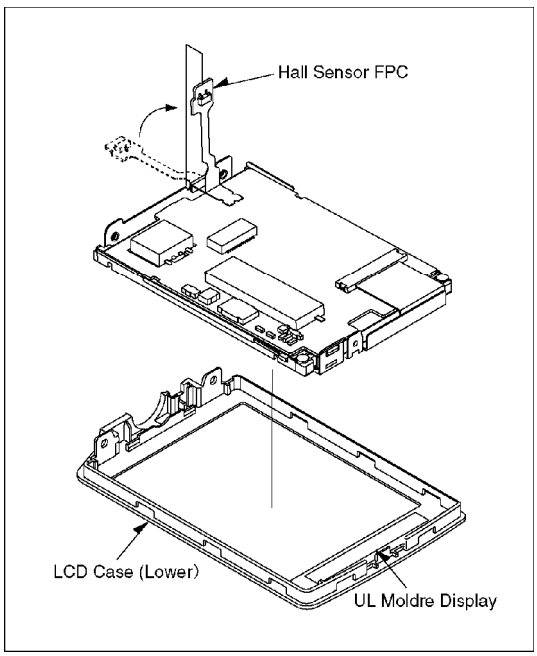


Fig. D22

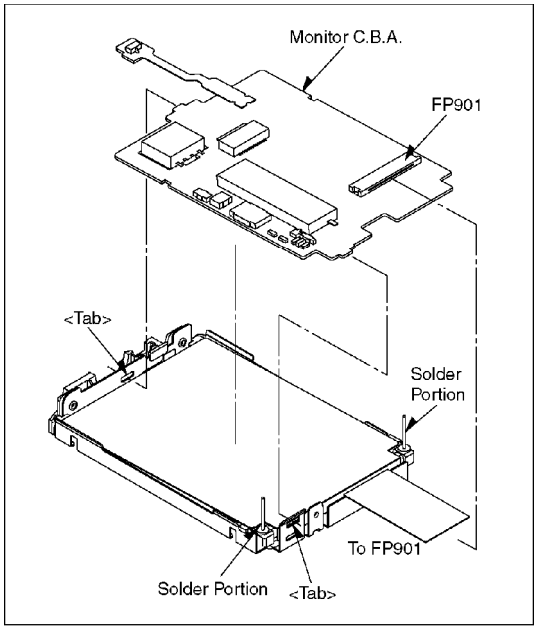

Monitor C.B.A.
FP901
<Tab>
Solder
Portion
To FP901
Solder Portion
<Tab>

Fig. D23

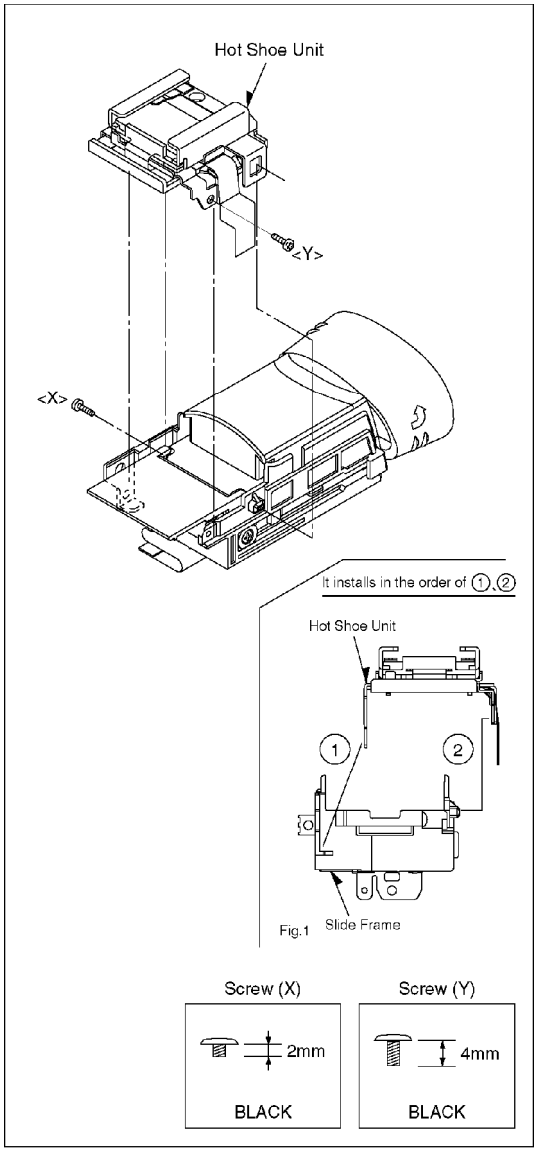

Hot Shoe Unit
<Y>
<X>
It installs in the order of ①,②
Hot Shoe Unit
1
2
Slide Frame
Fig.1
Screw (X)
2mm
BLACK
Screw (Y)
4mm
BLACK

Fig. D24

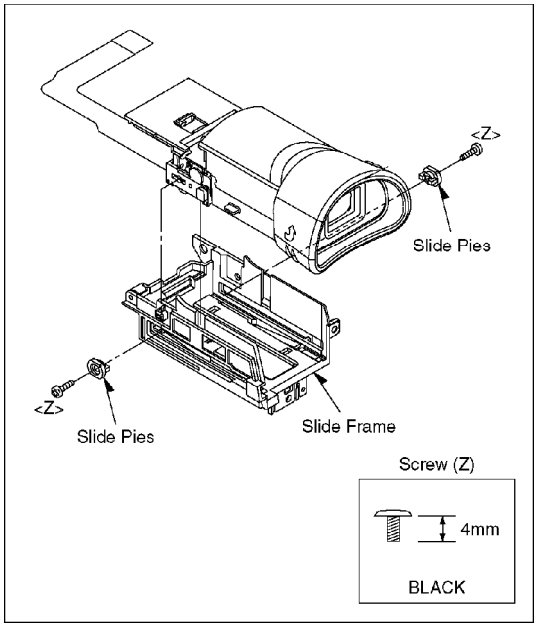


Fig. D25

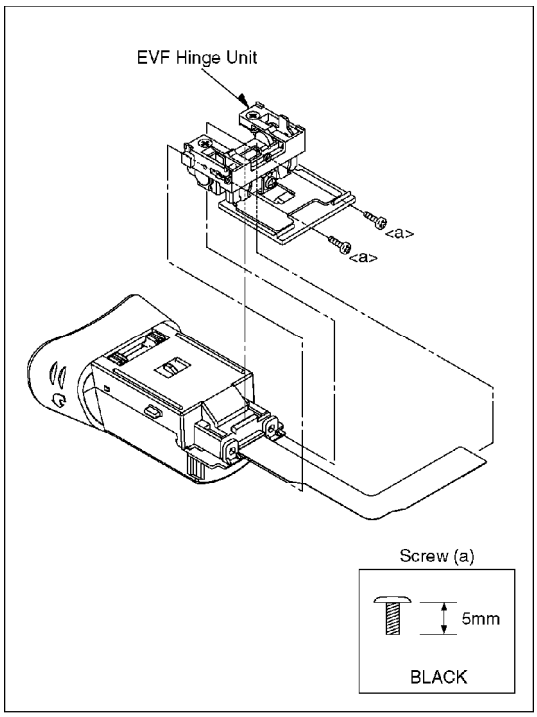


Fig. D26

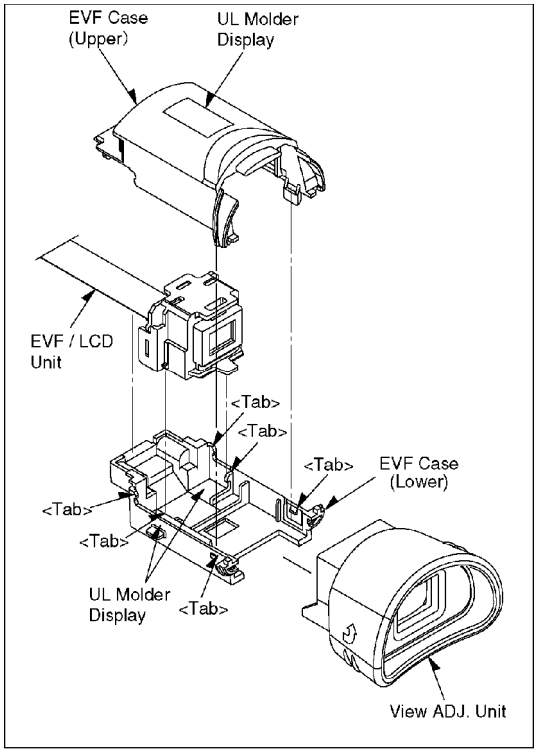


Fig. D27

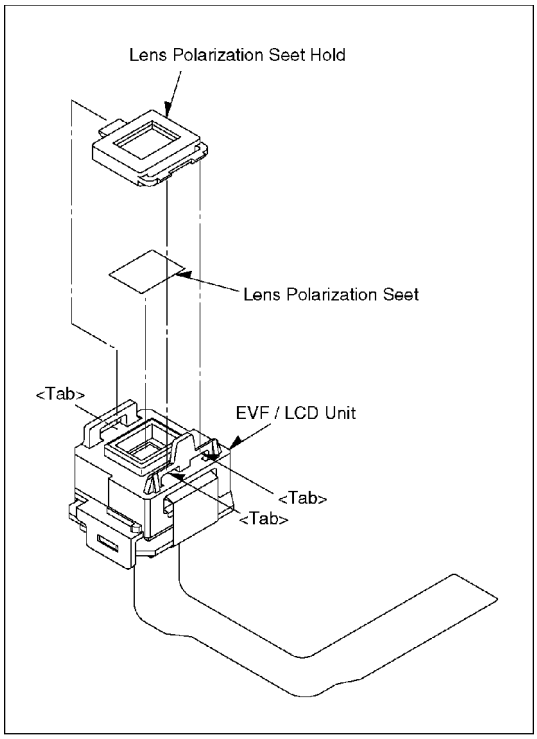
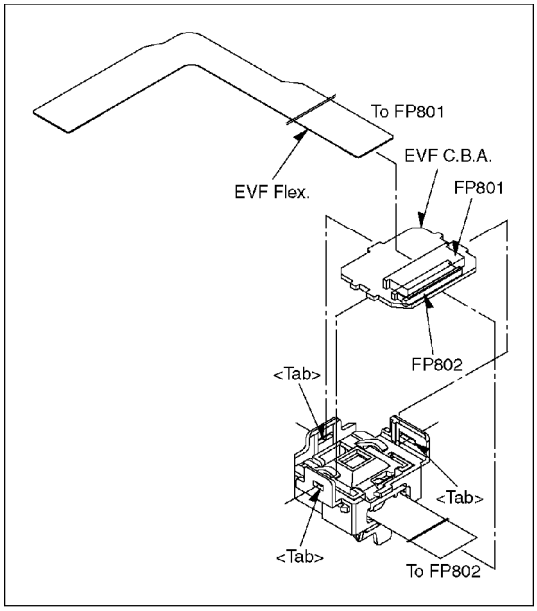


Fig. D28



7.3. DISASSEMBLY PROCEDURES OF CAMERA LENS UNIT

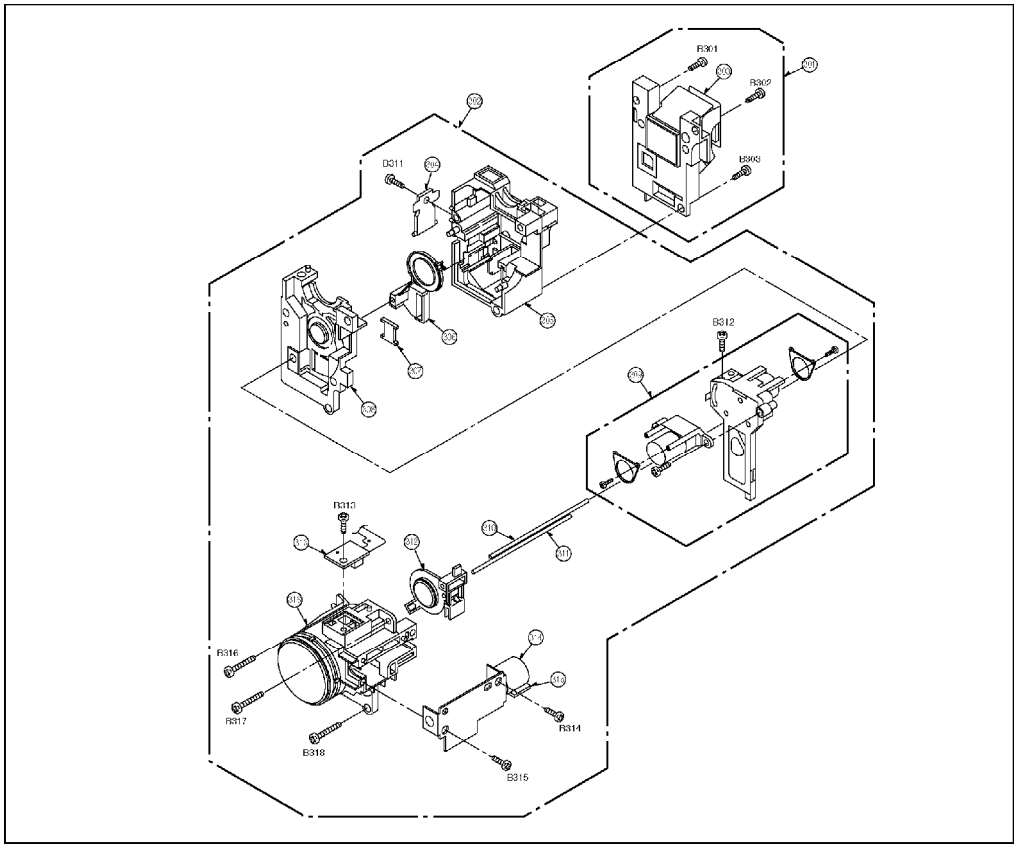
The following flowchart describes order or steps for removing the Camera lens unit and certain printed circuit boards in order to make access to the item needing service. / To reassemble the unit follow the steps in reverse order.

Fig. L1

1. Prism Unit	Ref.-No.301
2. MR Sensor	Ref.-No.304
3. Master Flange Unit	Ref.-No.305
4. 4th Moving Frame Unit & Side Yoke	Ref.-No.306/307
5. 3rd Moving Frame Unit	Ref.-No.308
6. IRIS Unit	Ref.-No.309
7. Guide Pole & 2nd Moving Frame Unit	Ref.-No.310/311/312
5. Zoom Motor Unit & ZM Terminal Base	Ref.-No.314/315
6. Lens Flex. C.B.A. & Lens Main Frame Unit	Ref.-No.313/316

Note 1:
Each Ref.numbers are equivalent to number of Fig.L2 and Parts List.

Fig. L2



8. ABBREVIATIONS

9. WAVEFORM TABLE

10. SCHEMATIC DIAGRAMS

10.1. OVERALL SCHEMATIC DIAGRAM

10.2. INTERCONNECTION SCHEMATIC DIAGRAM

10.3. CASSETTE COVER UNIT SCHEMATIC DIAGRAM

10.4. SIDE (L) SCHEMATIC DIAGRAM

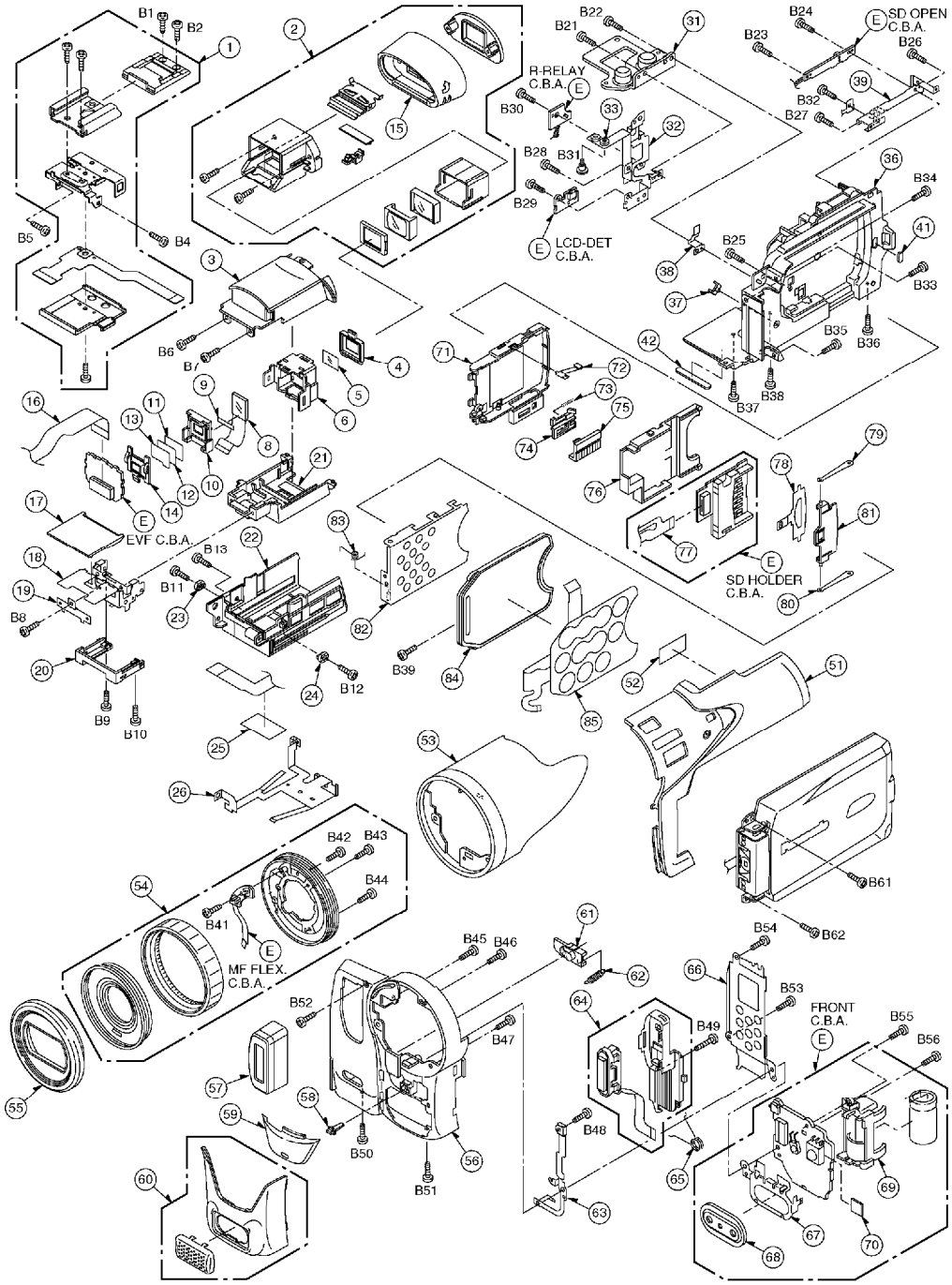
10.5. REAR OPERATION SCHEMATIC DIAGRAM

10.6. EVF SCHEMATIC DIAGRAM

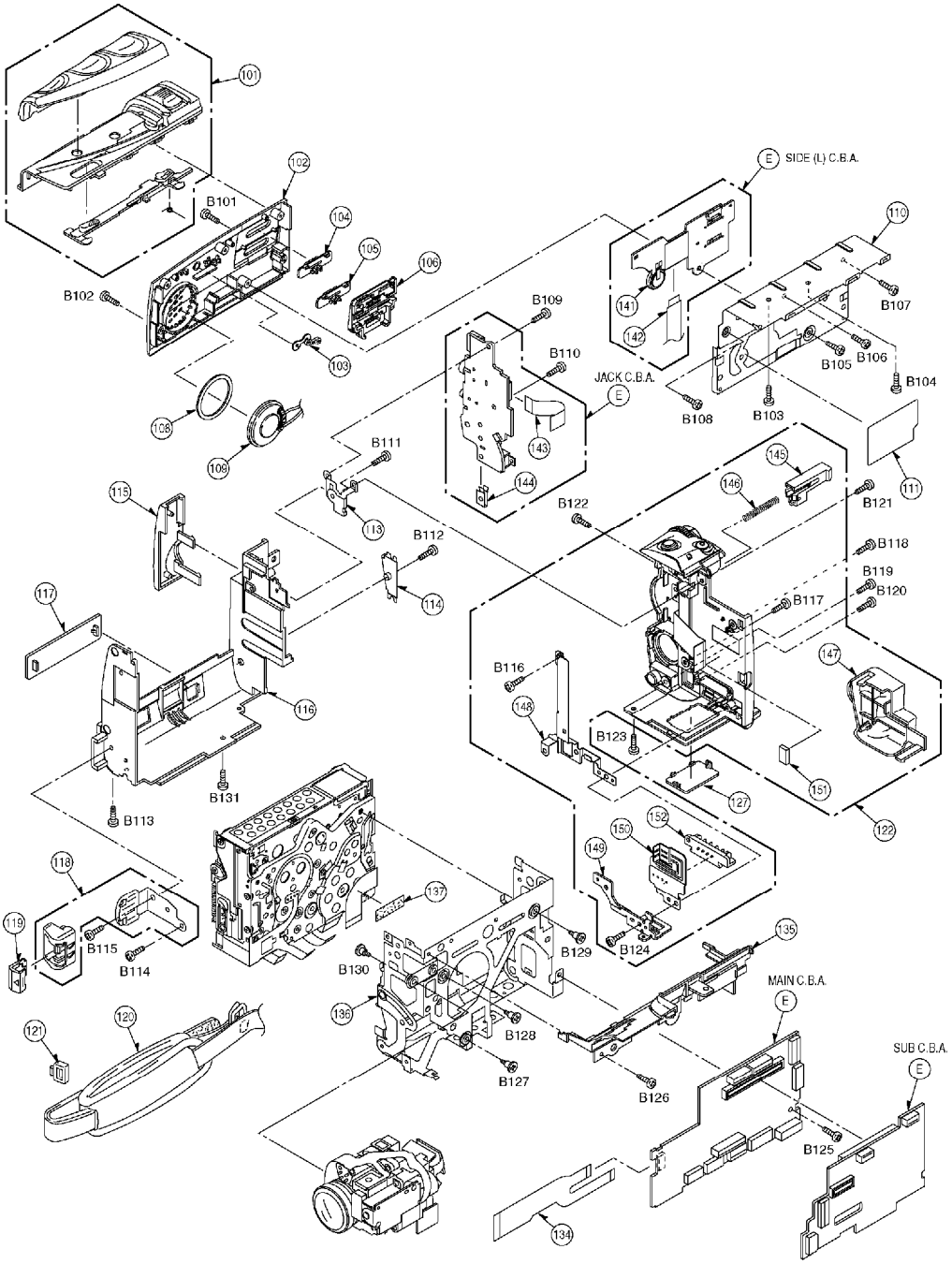
10.7. VTR OPERATION SCHEMATIC DIAGRAM

10.8. SD HOLDER SCHEMATIC DIAGRAM

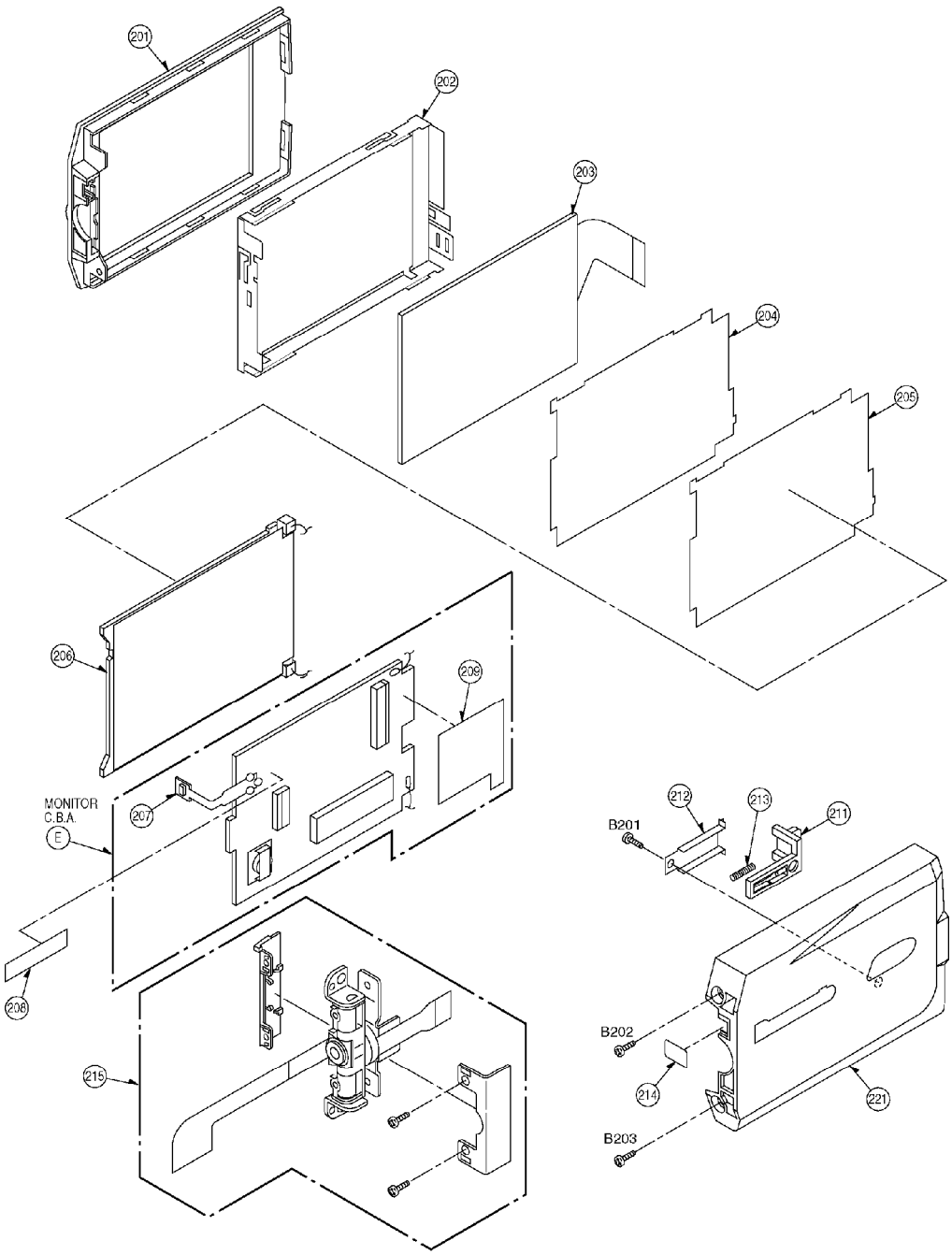
10.9. MF SENSOR SCHEMATIC DIAGRAM
10.10. SIDE (R) SCHEMATIC DIAGRAM
10.11. CCD FLEX. SCHEMATIC DIAGRAM
10.12. FRONT SCHEMATIC DIAGRAM
10.13. JACK SCHEMATIC DIAGRAM
10.14. MONITOR/ HALL SENSOR FLEX. SCHEMATIC DIAGRAM
11. CIRCUIT BOARD ASSEMBLIES
11.1. SIDE (L) C.B.A.
11.2. EVF C.B.A.
11.3. SD OPEN C.B.A.
11.4. SD HOLDER C.B.A.
11.5. SIDE (R) (RELAY) C.B.A.
11.6. SIDE (R) (LCD DET) C.B.A.
11.7. CCD FLEX. C.B.A.
11.8. FRONT C.B.A.
11.9. JACK C.B.A.
11.10. MONITOR C.B.A.
12. EXPLODED VIEWS
12.1. FRAME& CASING SECTION (1)



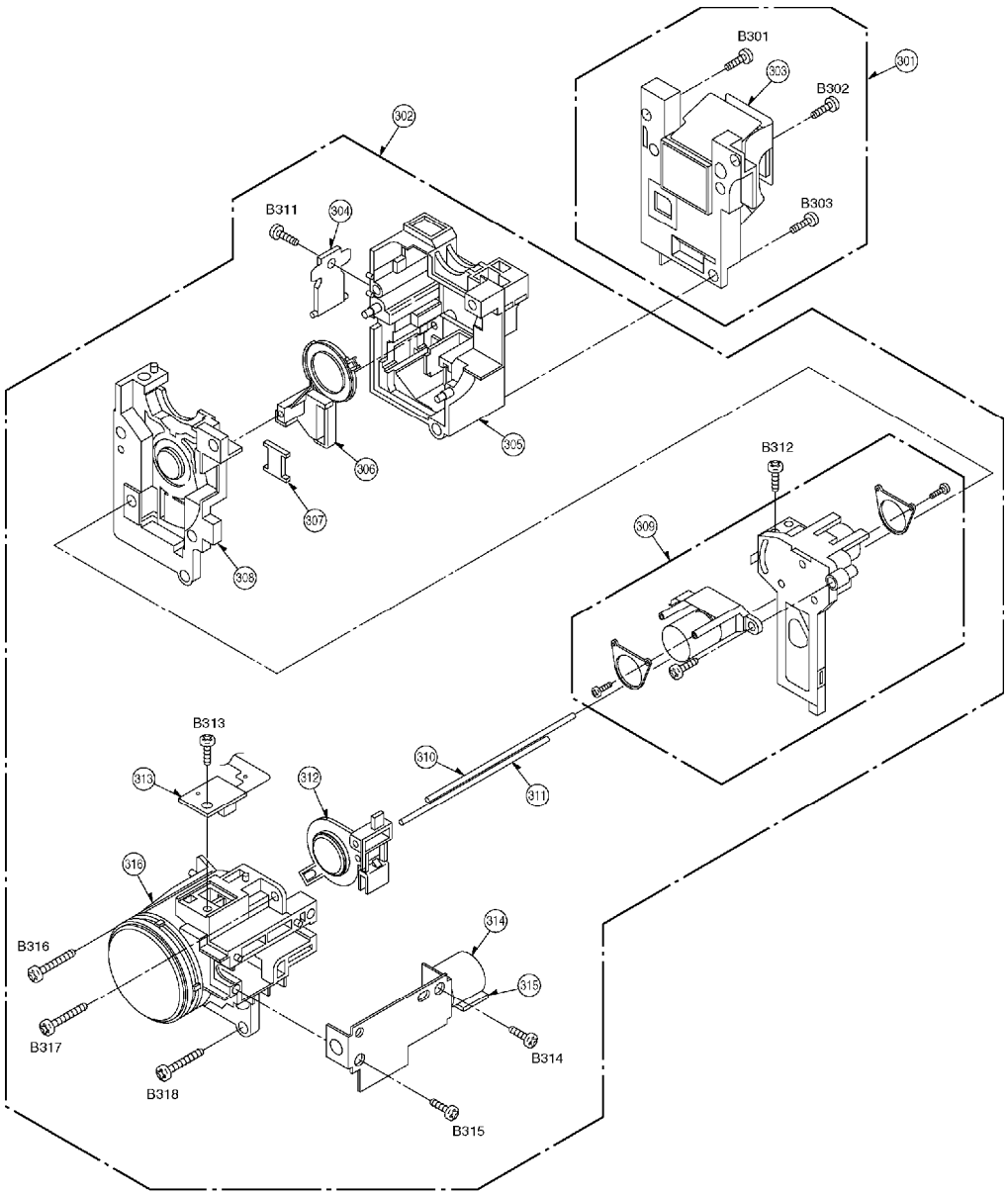
12.2. FRAME& CASING SECTION (2)



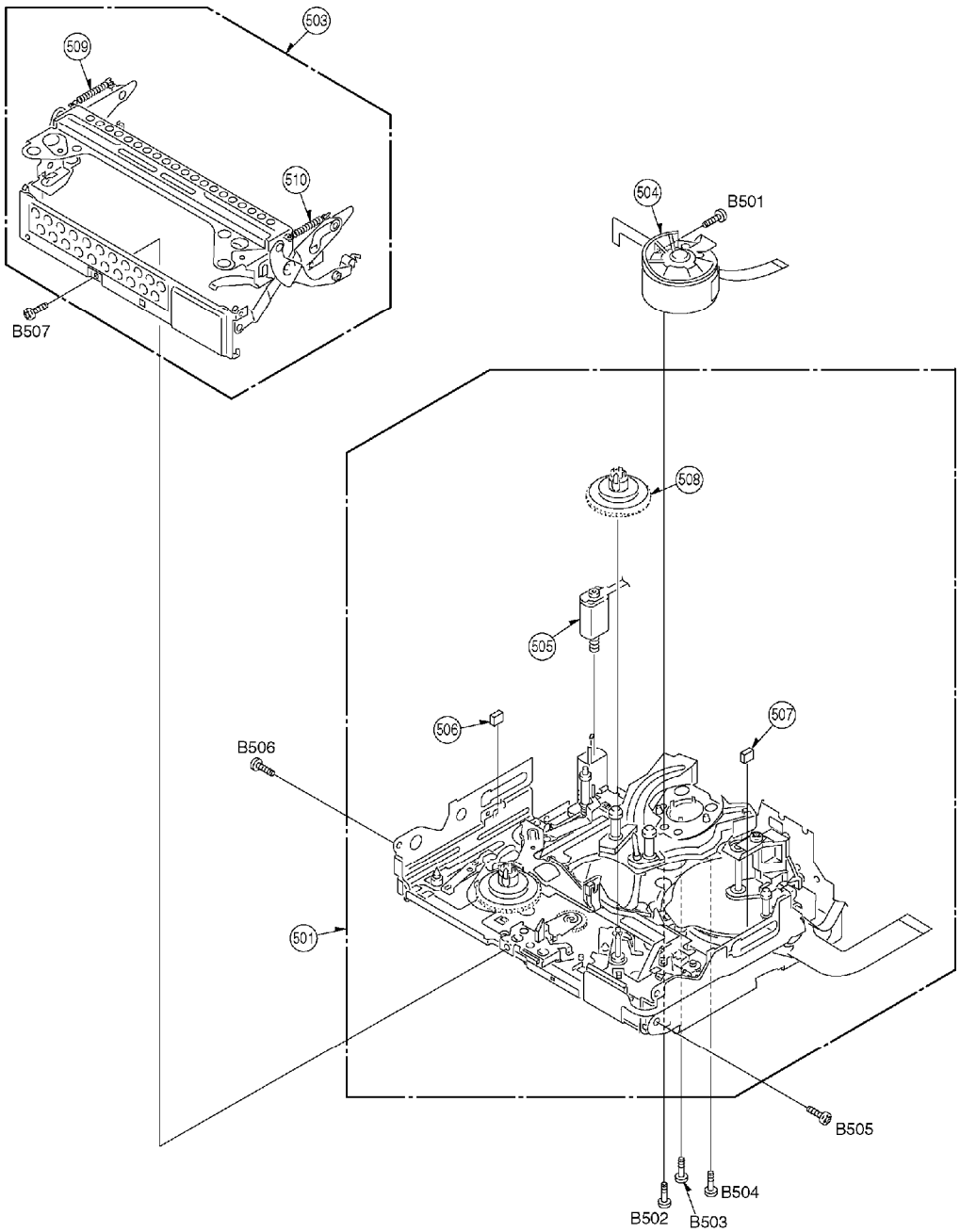
12.3. LCD SECTION



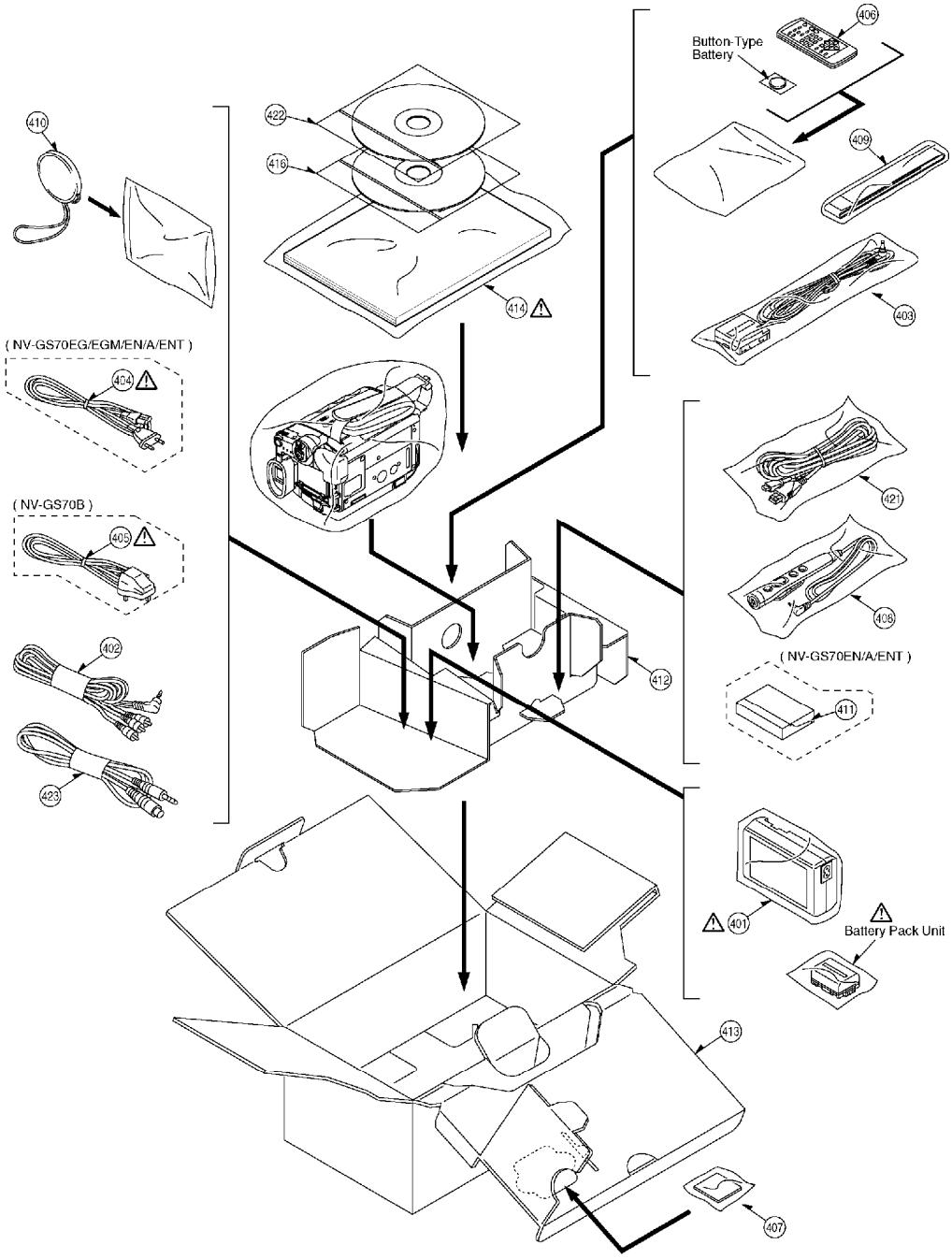
12.4. CAMERA LENS SECTION



12.5. VCR MECHANISM SECTION



12.6. PACKING PARTS& ACCESSORIES SECTION



13. REPLACEMENT PARTS LIST

13.1. FRAME& CASING SECTION (1) PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	VYK0S11	HOT SHOE U.	1	
2	VYK0S10	EVF VIEW ADJ. U.	1	
3	VKM6136	EVF CASE (UPPER)	1	
4	VGQ7205	LENS POLARIZING	1	
		SHEET HOLDER		
5	VGL1043	LENS POLARIZING SHEET	1	
6	VGQ7207	LCD HOLDER	1	
8	L5BDDXH00011	LCD PANEL	1	
9	VGQ7204	EVF TAPE	1	
10	VGQ7201	LCD PIECE	1	
11	VGL1028	EVF DIFFUSION SHEET	1	
12	VGL1029	EVF PRISM SHEET	1	
13	VGL1041	BL POLARIZING SHEET	1	
14	VGQ7102	BL PIECE	1	
15	VMG1526	EYE CAP	1	
16	VWJ1639	EVF FLEX.	1	
17	VGQ7269	SLIDE PROTECT PIECE	1	
18	VXA7631	EVF HINGE U.	1	
19	VMP7633	CLICK SPRING	1	
20	VGQ7216	SLIDE COVER	1	
21	VKM6103	EVF CASE (LOWER)	1	
22	VGQ7215	SLIDE FRAME	1	
23	VGQ6692	SLIDE PIECE	1	
24	VGQ6692	SLIDE PIECE	1	
25	VGQ7392	TAPE	1	
26	VMP7622	EVF GROUND SPRING	1	
31	VMP7630	TRIPOD PLATE	1	
32	VMP7629	HINGE SUPPORT PLATE	1	
33	VMG1107	MECHA. CUSHION RUBBER	1	
36	VKM6137	SIDE BASE (R)	1	
37	VGL0849	POWER PANEL LIGHT	1	
38	VSC5492	SD GROUND PLATE	1	
39	VMP7631	REAR HOLD PLATE	1	
41	VMG1528	CUSHION RUBBER	1	
42	VKA0360	GRIP RUBBER	1	
51	VKM6193	SIDE COVER (R)	1	
52	VGQ2759	WIRING SHEET	1	
53	VGK2883	LENS DECORATION U.	1	
54	VYK0S30	MF U.	1	
55	VYQ2660	LENS HOOD U.	1	
56	VKM6138	FRONT CASE	1	
57	VYK0S06	FL CASE (FRONT) U.	1	
58	VGL1044	TALLY PANEL LIGHT	1	
59	VKW3110	SENSOR WINDOW	1	
60	VYK0S28	FRONT DECORATION U.	1	
61	VGU9338	FL LOCK KNOB	1	
62	VMB3752	FL LOCK KNOB SPRING	1	
63	VMP7641	FRONT GROUND PLATE	1	
64	VYK0S07	FL CASE (REAR) U.	1	
65	VMB3751	FL POP-UP SPRING	1	
66	VMP7621	FL GUIDE ANGLE	1	
67	VMP7639	MIC ANGLE	1	
68	VEP04838A	ECM U.	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
69	VGQ7222	CONDENSER HOLDER	1	
70	VGQ7390	SPACER	1	
71	VGQ7213	SD HOLDER BASE	1	
72	VMC1851	SD-DET SW SPRING	1	
73	VMB3755	SD OPEN KNOB SPRING	1	
74	VGU9341	SD OPEN KNOB	1	
75	VGQ7220	SD LOCK PIECE	1	
76	VGQ7217	SD HOLDER PIECE	1	
77	VWJ1642	SD FLEX.	1	
79	VMP7635	SD SLIDE LINK	1	
80	VMP7635	SD SLIDE LINK	1	
81	VGQ7218	SD HOLDER COVER	1	
82	VXA7633	SD SUPPORT PLATE U.	1	
83	VMB3755	SD DOOR SPRING	1	
84	VGQ7219	SD DOOR	1	
85	N9ZZ00000203	VTR OPERATION FLEX. U.	1	
B1	VHD1526	SCREW	1	
B2	VHD1526	SCREW	1	
B4	XQN16+BJ4FZ	SCREW	1	
B5	XQN16+B4FZ	SCREW	1	
B6	XQN16+BJ5FZ	SCREW	1	
B7	XQN16+BJ5FZ	SCREW	1	
B8	XQN16+B2FN	SCREW	1	
B9	XQN16+B3	SCREW	1	
B10	XQN16+B3	SCREW	1	
B11	VHD1532	SCREW	1	
B12	VHD1532	SCREW	1	
B13	XQN16+B2FZ	SCREW	1	
B21	XQN16+BJ4FN	SCREW	1	
B22	XQN16+BJ4FN	SCREW	1	
B23	XQN16+BJ4FN	SCREW	1	
B24	XQN16+BJ4FN	SCREW	1	
B25	XQN16+BJ4FN	SCREW	1	
B26	XQN16+BJ3	SCREW	1	
B27	XQN16+BJ3	SCREW	1	
B28	XQN16+BJ3	SCREW	1	
B29	XQN16+B3FZ	SCREW	1	
B30	XQN16+B3FZ	SCREW	1	
B31	VHD1353	SCREW	1	
B32	XQN16+B2FN	SCREW	1	
B33	XQN16+BJ5FN	SCREW	1	
B34	XQN16+BJ4FN	SCREW	1	
B35	XQN16+BJ4FN	SCREW	1	
B36	XQN16+B3FZ	SCREW	1	
B37	XQN16+B3FZ	SCREW	1	
B38	XQN16+B3FZ	SCREW	1	
B39	XQN16+BJ4FN	SCREW	1	
B41	XQN16+BJ3	SCREW	1	
B42	XQN16+BJ4FN	SCREW	1	
B43	XQN16+BJ4FN	SCREW	1	
B44	XQN16+BJ4FN	SCREW	1	
B45	XQN16+BJ5FN	SCREW	1	
B46	XQN16+BJ5FN	SCREW	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
B47	XQN16+BJ5FN	SCREW	1	
B48	XQN16+BJ5FN	SCREW	1	
B49	XQN16+BJ8	SCREW	1	
B50	XQN16+B3FZ	SCREW	1	
B51	XQN16+BJ6FZ	SCREW	1	
B52	XQN16+B4FZ	SCREW	1	
B53	XQN16+BJ3FN	SCREW	1	
B54	XQS16+AJ4FZ	SCREW	1	
B55	XQN16+BJ4FN	SCREW	1	
B56	XQN16+BJ4FN	SCREW	1	
B61	VHD1411	SCREW	1	
B62	VHD1411	SCREW	1	

13.2. FRAME& CASING SECTION (2) PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
101	VYK0S16	CASSETTE COVER (TOP) U.	1	
102	VGP5934	CASSETTE COVER (SIDE)	1	
103	VGU9307	RESET BUTTON	1	
104	VGU9339	MODE SELECT KNOB	1	
105	VGU9339	MODE SELECT KNOB	1	
106	VGQ7203	KNOB HOLDER	1	
108	VGQ5908	SPEAKER SHEET	1	
109	L0AA02A00036	SPEAKER U.	1	
110	VMP7626	CASSETTE FRAME	1	
111	VGQ7246	BATTERY PROTECT SHEET	1	
113	VMP7643	CASE (L) GROUND PLATE	1	
114	VMP7646	GRIP BELT ANGLE (REAR)	1	
115	VKF3724	JACK COVER (L)	1	
116	VKM6139	SIDE CASE (L)	1	
117	VKF3725	MECHA. ADJ. COVER	1	
118	VYK0S36	GRIP BELT ANGLE (L) U.	1	
119	VKF3767	LOCK PIECE COVER	1	
120	VYC0893	GRIP BELT U.	1	
121	VGQ7161	GRIP BELT PIECE	1	
122	VYK0S44	REAR CASE U.	1	
127	VKF3722	EVR COVER	1	
134	VWJ1636	FRONT FLEX.	1	
135	VKM6119	TOP CASE	1	
136	VYK0S35	MECHA. FRAME U.	1	
137	VGQ6407	TAPE	1	
141	ML920S/F9D	LITHIUM BATTERY	1	
142	VWJ1637	SIDE (L) FLEX.	1	
143	VWJ1643	JACK FLEX.	1	
144	VMP7736	GROUND PLATE	1	
145	VGU9340	BATTERY LOCK BUTTON	1	
146	VMB3753	BATTERY LOCK SPRING	1	
147	VKF3721	REAR JACK COVER	1	
148	VSC5491	REAR GROUND PLATE	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
149	VMP7627	GRIP BELT ANGLE	1	
150	VWJ1635	BUS FLEX.	1	
151	VGQ7357	BUS FLEX. CUSHION	1	
152	K4ZZ04000032	BATTERY CATCHER	1	
B101	VHD1601	SCREW	1	
B102	VHD1601	SCREW	1	
B103	XQN16+BJ4FN	SCREW	1	
B104	XQN16+BJ4FN	SCREW	1	
B105	XQN16+BJ4FN	SCREW	1	
B106	XQN16+BJ4FN	SCREW	1	
B107	XQN16+BJ4FN	SCREW	1	
B108	XQN16+BJ3	SCREW	1	
B109	XQN16+BJ4FN	SCREW	1	
B110	XQN16+BJ4FN	SCREW	1	
B111	XQN16+B3	SCREW	1	
B112	VHD1119	SCREW	1	
B113	XQN16+B2	SCREW	1	
B114	XQN16+B3FN	SCREW	1	
B115	XQN16+B4FZ	SCREW	1	
B116	XQN16+BJ3	SCREW	1	
B117	XQN16+B3FZ	SCREW	1	
B118	XQN16+B5FZ	SCREW	1	
B119	XQN16+B5FZ	SCREW	1	
B120	XQN16+B5FZ	SCREW	1	
B121	XQN16+BJ6FZ	SCREW	1	
B122	XQN16+BJ5FZ	SCREW	1	
B123	XQN16+B3FZ	SCREW	1	
B124	XQN16+BJ5FZ	SCREW	1	
B125	XQN16+B3FZ	SCREW	1	
B126	XQN16+B3	SCREW	1	
B127	VHD1133	SCREW	1	
B128	VHD1133	SCREW	1	
B129	VHD1133	SCREW	1	
B130	VHD1353	SCREW	1	
B131	XQN16+B3FZ	SCREW	1	

13.3. LCD SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
201	VKM6099	LCD CASE (LOWER)	1	
202	VSC5461	LCD SHIELD CASE	1	
203	L5BDDYH00004	LCD PANEL	1	
204	VGL1046	PRISM SHEET	1	
205	VGL1033	DIFFUSION SHEET	1	
206	VYK0W69	BACK LIGHT U.	1	
207	VEP06E80A	HOLE SENSOR FLEX.	1	
208	VGQ7387	TAPE	1	
209	VGQ7399	SHIELD SHEET	1	
211	VGQ7209	LCD LOCK PIECE	1	
212	VMP7628	LCD LOCK PLATE	1	
213	VMB3600	LCD LOCK SPRING	1	
214	VGQ4758	PROTECT SHEET	1	
215	VXD0391	LCD HINGE U.	1	
221	VYK0U52	LCD CASE (UPPER) U.	1	NV-GS70EG/EGM/B
221	VYK0W56	LCD CASE (UPPER) U.	1	NV-GS70EN/ENT/A
B201	XQS16+AJ3	SCREW	1	
B202	VHD1459	SCREW	1	
B203	VHD1459	SCREW	1	

13.4. CAMERA LENS SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
301	VXQ1155	PRISM U.	1	
302	VXW0602	LENS U.	1	
303	VEP22340A	CCD FLEX. C.B.A.	1	
304	VEK8449	MR SENSOR	1	
305	VXQ2277	MASTER FLANGE U.	1	
306	VXP2275	4TH MOVING FRAME U.	1	
307	VMA9961	SIDE YOKE	1	
308	VXQ1151	3RD MOVING FRAME U.	1	
309	L9ZZ00000198	IRIS U.	1	
310	VMS7312	GUIDE POLE	1	
311	VMS7312	GUIDE POLE	1	
312	VXP2274	2ND MOVING FRAME U.	1	
313	VEK0A23	LENS FLEX. C.B.A.	1	
314	08S1F8F6NE	ZOOM MOTOR U.	1	
315	VMX3055	ZM TERMINAL BASE	1	
316	VXQ1150	LENS MAIN FRAME U.	1	
B301	XQN16+CJ5	SCREW	1	
B302	XQN16+CJ5	SCREW	1	
B303	XQN16+CJ5	SCREW	1	
B311	XQN16+CJ5	SCREW	1	
B312	XQN16+CJ5	SCREW	1	
B313	XQN16+CJ5	SCREW	1	
B314	VHD1508	SCREW	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
B315	VHD1508	SCREW	1	
B316	VHD1509	SCREW	1	
B317	VHD1509	SCREW	1	
B318	VHD1509	SCREW	1	

13.5. VCR MECHANISM SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
501	VXA7735	MECHA. CHASSIS	1	
503	VXA7624	CASSETTE UP U.	1	
504	VEG1625	CYLINDER U.	1	
505	VEM0783	LOADING MOTOR U.	1	
506	B4ABB0000008	HOLE SENSOR	1	
507	B4ABB0000008	HOLE SENSOR	1	
508	VXR0401	T-REEL MOTOR	1	
509	VMB3766	CASSETTE UP SPRING	1	
510	VMB3766	CASSETTE UP SPRING	1	
B501	XQN14+B1FN	SCREW	1	
B502	VHD1585	SCREW	1	
B503	VHD1585	SCREW	1	
B504	VHD1585	SCREW	1	
B505	XQN14+B2FN	SCREW	1	
B506	XQN14+B2FN	SCREW	1	
B507	XQN14+B2FN	SCREW	1	

13.6. PACKING PARTS& ACCESSORIES SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
401	VSK0631	AC ADAPTOR	1	⚠
402	K2KC4CB00009	AV CABLE	1	
403	K2GJ2DZ00017	DC CABLE	1	
404	K2CQ2DA00003	AC CORD	1	NV-GS70EG/EGM/EN/ENT ⚠
404	VJA0754	AC CORD	1	NV-GS70A ⚠
				K2CJ2DA00002
405	VJA0940	AC CORD	1	NV-GS70B ⚠
				K2CT3DA00003
406	N2QAEC000003	REMOTE CONTROLLER	1	
407	VFA0353	SD CARD	1	
408	N2QCBD000030	UNIVERSAL REMOTE	1	
		CONTROLLER		
409	VFC3506-1A	SHOULDER BELT	1	
410	VYF2904	HOOD CAP U.	1	
411	VFK1451	HEAD CLEANING CASSETTE	1	NV-GS70EN/A/ENT
412	VPN5998	CUSHION	1	
413	VPG0T41	PACKING	1	NV-GS70EG
413	VPG0T42	PACKING	1	NV-GS70EGM
413	VPG0T43	PACKING	1	NV-GS70B
413	VPG0T44	PACKING	1	NV-GS70EN/A/ENT
414	VQT0C76	OPERATING INSTRUCTIONS	1	NV-GS70EG ⚠
		(GERMAN,FRENCH)		
414	VQT0C77	OPERATING INSTRUCTIONS	1	NV-GS70EG ⚠
		(ITALIAN,DUTCH)		
414	VQT0C78	OPERATING INSTRUCTIONS	1	NV-GS70EGM ⚠
		(PORTUGUESE,SPANISH)		
414	VQT0C79	OPERATING INSTRUCTIONS	1	NV-GS70EGM ⚠
		(SWEDISH,DANISH)		
414	VQT0C80	OPERATING INSTRUCTIONS	1	NV-GS70B ⚠
		(ENGLISH)		
414	VQT0C81	OPERATING INSTRUCTIONS	1	NV-GS70EN/ENT ⚠
		(CHINESE,ENGLISH)		
414	VQT0C82	OPERATING INSTRUCTIONS	1	NV-GS70EN/ENT ⚠
		(RUSSIAN,ARABIC)		
414	VQT0C83	OPERATING INSTRUCTIONS	1	NV-GS70A ⚠
		(ENGLISH)		
416	VQT0C59	OPERATING INSTRUCTIONS	1	NV-GS70EG
		FOR PC KIT (CD-ROM)		
		(GERMAN,FRENCH,		
		ITALIAN,DUTCH)		
416	VQT0C60	OPERATING INSTRUCTIONS	1	NV-GS70EGM
		FOR PC KIT (CD-ROM)		
		(PORTUGUESE,SPANISH,		
		SWEDISH,DANISH)		
416	VQT0C61	OPERATING INSTRUCTIONS	1	NV-GS70A/B
		FOR PC KIT (CD-ROM)		
		(ENGLISH)		
416	VQT0C62	OPERATING INSTRUCTIONS	1	NV-GS70EN/ENT
		FOR PC KIT (CD-ROM)		

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
		(CHINESE,ENGLISH,		
		RUSSIAN,ARABIC)		
421	VFA0397	USB CABLE	1	
422	VFF0190-S	CD-ROM FOR PC KIT	1	
423	K2KC4CB00008	S CABLE	1	

13.7. ELECTRICAL REPLACEMENT PARTS LIST

Note: 1. Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE: Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. Unless otherwise specified,
All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICROFARADS (uf), P=uuF.
4. The P.C. Board units marked width "■" show below the main assembled parts.
5. The marking (RTL) indicaters the retention time is limited for this item.
After the discontinuation of this assembly in production, it will no longer be available.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
■	VEP03G39B	MAIN C.B.A.	1	(RTL)
■	VEP23584B	SUB C.B.A.	1	(RTL)
■	VEP22340A	CCD FLEX. CARD C.B.A.	1	
■	VEP06F28A	SIDE (L) C.B.A.	1	(RTL)
■	VEP04837A	JACK C.B.A.	1	(RTL)
■	VEP001A9A	R-RELAY C.B.A.	1	(RTL)
■	VEP06F29A	LCD DET C.B.A.	1	(RTL)
■	VEP001B5A	SD OPEN C.B.A.	1	(RTL)
■	VEP001B0A	SD HOLDER C.B.A.	1	(RTL)
■	VEP26283A	MONITOR C.B.A.	1	(RTL) INCLUDING THE
				HOLE SENSOR FLEX UNIT
				(VEP06E80A).
■	VEP06E80A	HOLE SENSOR FLEX UNIT	1	(RTL) INCLUDED IN
				MONITOR C.B.A.(VEP26283A)
■	VEP28300B	EVF C.B.A.	1	(RTL)
■	----------	MF FLEX. CARD UNIT	1	(Not supplied)
■	VEP04836A	FRONT C.B.A.	1	(RTL)
■	VEP04836A	FRONT C.B.A.	1	(RTL)
■	VEP22340A	CCD FLEX. CARD C.B.A.		
C202	ECJ2YB1A105K	C.CAPACITOR CH 10V 1U	1	
C204	ECJ2YB1A105K	C.CAPACITOR CH 10V 1U	1	
C206	ECJ2YB1A105K	C.CAPACITOR CH 10V 1U	1	
C207	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C208	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C209	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C212	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
C213	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
C214	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
C215	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C216	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
C217	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
D201	MA143	DIODE	1	
D202	MA143	DIODE	1	
D203	MA143	DIODE	1	
PP201	VJP4009C040	CONNECTOR (MALE) 40P	1	K1KA40A00113
Q201	2SC4627JCL	TRANSISTOR	1	
Q202	2SC4627JCL	TRANSISTOR	1	
Q203	2SC4627JCL	TRANSISTOR	1	
R201	ERJ2GE0R00Y	M.RESISTOR CH 1/16W 0	1	
R202	ERJ2GEJ681X	M.RESISTOR CH 1/16W 680	1	ERJ2RMJ681X
R203	ERJ2GE0R00Y	M.RESISTOR CH 1/16W 0	1	
R204	ERJ2GEJ681X	M.RESISTOR CH 1/16W 680	1	ERJ2RMJ681X
R205	ERJ2GE0R00Y	M.RESISTOR CH 1/16W 0	1	
R206	ERJ2GEJ681X	M.RESISTOR CH 1/16W 680	1	ERJ2RMJ681X
R219	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R220	ERJ2GEJ123	M.RESISTOR CH 1/16W 12K	1	
R221	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R222	ERJ2GEJ123	M.RESISTOR CH 1/16W 12K	1	
R223	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R224	ERJ2GEJ123	M.RESISTOR CH 1/16W 12K	1	
~	VEP06F28A	SIDE (L) C.B.A.		(RTL)
B6101	ML920S/F9D	LITHIUM BATTERY	1	
FP6301	K1MN21B00036	CONNECTOR 21P	1	
FP6302	K1MN06B00038	CONNECTOR 6P	1	
R6301	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R6303	ERJ2GEJ471X	M.RESISTOR CH 1/16W 470	1	ERJ2RMJ471X
R6304	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R6305	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R6306	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R6307	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R6308	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
S6301	VSS0533	SLIDE SWITCH	1	K0D112A00116
S6302	K0H1BA000436	SWITCH	1	
S6303	VSS0533	SLIDE SWITCH	1	K0D112A00116
VZ6301	VRT0158	TRANSIENT/SURGE ABSORBER	1	D4ED12710002
VZ6302	VRT0158	TRANSIENT/SURGE ABSORBER	1	D4ED12710002
VZ6303	VRT0158	TRANSIENT/SURGE ABSORBER	1	D4ED12710002
VZ6304	VRT0158	TRANSIENT/SURGE ABSORBER	1	D4ED12710002
VZ6305	VRT0158	TRANSIENT/SURGE ABSORBER	1	D4ED12710002
VZ6307	VRT0158	TRANSIENT/SURGE ABSORBER	1	D4ED12710002
■	VEP04837A	JACK C.B.A.		(RTL)

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4001	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
C4003	ECJ0EB1E472K	C.CAPACITOR CH 25V 4700P	1	
C4004	ECJ0EB1E472K	C.CAPACITOR CH 25V 4700P	1	
C4901	ECJ0EB1E472K	C.CAPACITOR CH 25V 4700P	1	
C4902	ECJ0EB1E472K	C.CAPACITOR CH 25V 4700P	1	
C4903	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
C4904	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
C4905	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	1	F3F0J226A007
C4906	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	1	F3F0J226A007
C4908	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
C4909	F1J0J475A008	C.CAPACITOR 6.3V 4.7U	1	
C4910	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	1	F3F0J226A007
C4913	F1J0J475A008	C.CAPACITOR 6.3V 4.7U	1	
D4901	MA2SD2400L	DIODE	1	
FP6201	VJS4264B033	CONNECTOR (FEMALE) 33P	1	
JK3001	VJJ0670	S-JACK	1	K2HZ104A0002
JK3801	K1FA104A0014	CONNECTOR	1	
JK3901	K1KA05B00141	CONNECTOR	1	
JK4001	K2HC106B0010	JACK	1	
JK4901	K2HC107B0002	JACK	1	
LB3902	J0JAC0000014	FILTER	1	J0JAC0000016
LB4001	J0JBC0000054	INDUCTOR	1	J0JBC0000059
LB4003	J0JAC0000014	FILTER	1	J0JAC0000016
LB4005	J0JAC0000014	FILTER	1	J0JAC0000016
LB4006	J0JAC0000014	FILTER	1	J0JAC0000016
LB4007	J0JBC0000054	INDUCTOR	1	J0JBC0000059
LB4008	J0JBC0000054	INDUCTOR	1	J0JBC0000059
LB4009	J0JAC0000014	FILTER	1	J0JAC0000016
LB4921	J0JAC0000015	FILTER	1	J0JAC0000017
LB4922	J0JAC0000015	FILTER	1	J0JAC0000017
LB4923	J0JAC0000015	FILTER	1	J0JAC0000017
LB4924	J0JAC0000015	FILTER	1	J0JAC0000017
LB4926	J0JAC0000015	FILTER	1	J0JAC0000017
LB4928	J0JAC0000015	FILTER	1	J0JAC0000017
Q4901	2SD2216J0L	TRANSISTOR	1	
Q4902	2SB1462JHL	TRANSISTOR	1	
Q4903	2SD2216J0L	TRANSISTOR	1	
Q4904	2SB1462JHL	TRANSISTOR	1	
Q4907	2SD1819A0L	TRANSISTOR	1	
Q4908	2SD1819A0L	TRANSISTOR	1	
QR4901	B1GDBEHH0001	TRANSISTOR-RESISTOR	1	
R3903	ERJ2GE0R00Y	M.RESISTOR CH 1/16W 0	1	
R3904	ERJ2GE0R00Y	M.RESISTOR CH 1/16W 0	1	
R3905	ERJ2GE0R00Y	M.RESISTOR CH 1/16W 0	1	
R3906	ERJ2GE0R00Y	M.RESISTOR CH 1/16W 0	1	
R3907	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	1	
R3920	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3921	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	1	
R4001	ERJ2GEJ101Y	M.RESISTOR CH 1/16W 100	1	
R4901	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R4902	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	1	ERJ2RMJ472X
R4904	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4905	ERJ2GEJ471X	M.RESISTOR CH 1/16W 470	1	ERJ2RMJ471X
R4906	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4907	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	1	
R4908	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R4909	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R4910	ERJ2GEJ562X	M.RESISTOR CH 1/16W 5.6K	1	
R4911	ERJ2GEJ151	M.RESISTOR CH 1/16W 150	1	
R4912	ERJ2GEJ471X	M.RESISTOR CH 1/16W 470	1	ERJ2RMJ471X
R4913	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4914	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	1	
R4915	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R4916	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R4917	ERJ2GEJ562X	M.RESISTOR CH 1/16W 5.6K	1	
R4918	ERJ2GEJ151	M.RESISTOR CH 1/16W 150	1	
R4919	ERJ2GE0R00Y	M.RESISTOR CH 1/16W 0	1	
R4920	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4921	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	1	
R4922	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1	
R4923	ERJ2GEJ683X	M.RESISTOR CH 1/16W 68K	1	ERJ2RMJ683X
R4924	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
S6212	K0L1BB000022	DETECT SWITCH	1	
VZ3901	D4ED12710001	TRANSIENT/SURGE ABSORBER	1	
VZ4001	D4ED1120A002	TRANSIENT/SURGE ABSORBER	1	
VZ4002	D4ED1270A003	TRANSIENT/SURGE ABSORBER	1	
VZ4003	D4ED1270A003	TRANSIENT/SURGE ABSORBER	1	
VZ4004	D4ED12710001	TRANSIENT/SURGE ABSORBER	1	
VZ4005	D4ED1120A002	TRANSIENT/SURGE ABSORBER	1	
VZ4902	D4ED1120A002	TRANSIENT/SURGE ABSORBER	1	
VZ4903	D4ED1120A002	TRANSIENT/SURGE ABSORBER	1	
■	VEP001A9A	R-RELAY C.B.A.		(RTL)
D6601	B3AAB0000037	LED	1	
FP6601	K1MN06A00016	CONNECTOR 6P	1	
■	VEP06F29A	LCD DET C.B.A.		(RTL)
S6701	K0L1BA000074	SWITCH	1	
■	VEP001B5A	SD OPEN C.B.A.		(RTL)
LB6801	VLF1144A102	COIL 1000UH	1	
S6801	K0L1BB000022	DETECT SWITCH	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
■	VEP001B0A	SD HOLDER C.B.A.		(RTL)
C3901	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C3902	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
C3905	ECUX1H050CCQ	C.CAPACITOR CH 50V 5P	1	
FP6202	VJS3320D010	CONNECTOR (FEMALE) 10P	1	K1MN10B00042
HS3401	K1NA09E00039	CONNECTOR 9P	1	
R3901	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
R3902	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
R3908	ERJ2GEJ331X	M.RESISTOR CH 1/16W 330	1	ERJ2RMJ331X
R3909	ERJ2GEJ220X	M.RESISTOR CH 1/16W 22	1	ERJ2RMJ220X
R3912	ERJ2GEJ220X	M.RESISTOR CH 1/16W 22	1	ERJ2RMJ220X
R3913	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	1	ERJ2RMJ472X
■	VEP26283A	MONITOR C.B.A.		(RTL)
C901	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C902	ECST0JY106R	T.CAPACITOR CH 6.3V 10U	1	
C903	ECUX0J474KBV	C.CAPACITOR CH 6.3V 0.47U	1	
C904	ECUX0J474KBV	C.CAPACITOR CH 6.3V 0.47U	1	
C905	ECUX0J474KBV	C.CAPACITOR CH 6.3V 0.47U	1	
C906	ECUX0J474KBV	C.CAPACITOR CH 6.3V 0.47U	1	
C910	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
C911	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C912	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C913	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C914	ECST0JX476R	T.CAPACITOR CH 6.3V 47U	1	
C915	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C916	ECJ0WB1C103K	C.CAPACITOR CH 16V 0.01U	1	
C917	ECST0JY335ZR	T.CAPACITOR CH 6.3V 3.3U	1	ECST0JY335R
C918	ECUX1C682KBQ	C.CAPACITOR CH 16V 6800P	1	
C919	ECJ0EB1E102K	C.CAPACITOR CH 25V 1000P	1	
C920	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
C921	F1J1C105A091	C.CAPACITOR 16V 1U	1	
C922	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
C923	ECUX1E332KBQ	C.CAPACITOR CH 25V 3300P	1	
C924	ECJ0EC1H180J	C.CAPACITOR CH 50V 18P	1	
C925	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C926	ECJ1VC1H470G	C.CAPACITOR CH 50V 47P	1	
C927	ECJ1VC1H470G	C.CAPACITOR CH 50V 47P	1	
C928	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C929	ECJ0EB1E102K	C.CAPACITOR CH 25V 1000P	1	
C931	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
C932	ECST0JY106R	T.CAPACITOR CH 6.3V 10U	1	
C947	ECJ1ZB1C104K	C.CAPACITOR CH 16V 0.1U	1	
C949	ECJ4YB1C106V	C.CAPACITOR CH 16V 10U	1	
D901	MA2X33800L	DIODE	1	
D902	MA2J11100L	DIODE	1	
D903	MA2J11100L	DIODE	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
D905	MA2J11100L	DIODE	1	
D908	02DZ6.2YTPH3	DIODE	1	B0BC6R100014
FP901	K1MN24B00092	CONNECTOR 24P	1	
FP903	K1MN25B00033	CONNECTOR 25P	1	K1MN25B00034
IC901	C0HBA0000094	IC	1	
IC902	MN7L012B5MF	IC	1	
IC903	C0CBCAB00006	IC	1	
IC991	DN8797MS	HOLE IC	1	
L901	VLQ0426J3R3	COIL 3.3UH	1	G1C3R3J00009
L902	VLQ0426J100	COIL 10UH	1	G1C100J00008
L903	G1C100KA0055	CHIP INDUCTOR 10UH	1	
L905	G1C100KA0055	CHIP INDUCTOR 10UH	1	
LB901	VLF1144A102	COIL 1000UH	1	
Q902	B1DFCG000004	TRANSISTOR	1	
Q903	2SB1462JHL	TRANSISTOR	1	
Q904	2SD2216J0L	TRANSISTOR	1	
Q906	2SB1462JHL	TRANSISTOR	1	
QR901	UN9214J	TRANSISTOR-RESISTOR	1	
QR902	UN9214J	TRANSISTOR-RESISTOR	1	
QR905	UN9214J	TRANSISTOR-RESISTOR	1	
QR906	UN9214J	TRANSISTOR-RESISTOR	1	
QR907	B1GDBEHH0001	TRANSISTOR-RESISTOR	1	
R901	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	D0GB101JA002
R902	ERJ3RBD183	M.RESISTOR CH 1/16W 18K	1	
R903	ERJ3RBD561	M.RESISTOR CH 1/16W 560	1	
R904	ERJ3RBD273	M.RESISTOR CH 1/16W 27K	1	
R905	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	1	
R906	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	1	
R907	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	1	
R908	ERJ3GEYJ394V	M.RESISTOR CH 1/16W 390K	1	
R909	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R910	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	1	
R911	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	1	
R912	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R913	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	1	D0GB333JA002
R914	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R915	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	1	
R916	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R917	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	1	
R918	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	1	
R919	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	D0GB101JA002
R920	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	D0GB101JA002
R921	ERJ6GEYJ180V	M.RESISTOR CH 1/10W 18	1	
R923	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R924	ERJ3GEYJ563V	M.RESISTOR CH 1/16W 56K	1	
R925	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	1	D0GB333JA002
R926	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R927	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R928	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	1	D0GB333JA002
R929	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	1	D0GB333JA002
R930	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	1	D0GB333JA002
R931	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R932	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R959	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R961	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R973	ERJ8GEYJ335	M.RESISTOR CH 1/8W 3.3M	1	
R974	ERJ8GEYJ335	M.RESISTOR CH 1/8W 3.3M	1	
R975	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R976	ERJ3RBD681V	M.RESISTOR CH 1/16W 680	1	
R977	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	1	
R978	ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	1	
R989	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
T901	ETJ09K59AZ	CHIP TRANSFORMER	1	
T902	EFTU21R203	TRANSFORMER	1	
■	VEP06E80A	HOLE SENSOR FLEX UNIT		(RTL)
IC991	DN8797MS	HOLE IC	1	
■	VEP28300B	EVF C.B.A.		(RTL)
D801	B3AFB0000027	LED	1	
D803	02DZ6.2YTPH3	DIODE	1	B0BC6R100014
D804	MA3S13300L	DIODE	1	
FP801	VJS3930B016	CONNECTOR (FEMALE) 16P	1	
FP802	K1MN16B00124	CONNECTOR 16P	1	
Q801	B1ABBE000002	TRANSISTOR	1	
R801	ERJ3GEYJ472A	M.RESISTOR CH 1/16W 4.7K	1	
R804	ERJ3RED510	M.RESISTOR CH 1/16W 51	1	
W802	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	1	
■	----------	MF FLEX. CARD UNIT		(Not supplied)
Q710	CNA1312K01VT	PHOTO SENSOR	1	
Q711	CNA1312K01VT	PHOTO SENSOR	1	
■	VEP04836A	FRONT C.B.A.		(RTL)
C491	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C492	ECJ1VB1A224K	C.CAPACITOR CH 10V 0.22U	1	
C493	ECJ1VB1A224K	C.CAPACITOR CH 10V 0.22U	1	
C4801	ECJ0WB1C103K	C.CAPACITOR CH 16V 0.01U	1	
C4802	ECJ0WB1C103K	C.CAPACITOR CH 16V 0.01U	1	
C4803	ECUX1E332KBQ	C.CAPACITOR CH 25V 3300P	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4804	ECUX1E332KBQ	C.CAPACITOR CH 25V 3300P	1	
C4805	ECJ0WB1C103K	C.CAPACITOR CH 16V 0.01U	1	
C4806	ECJ0WB1C103K	C.CAPACITOR CH 16V 0.01U	1	
C4807	F1J0J475A008	C.CAPACITOR 6.3V 4.7U	1	
C4808	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	1	F3F0J226A007
C4811	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
C4812	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
C4899	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
C6401	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C6402	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	1	F3F0J226A007
C7001	ECUX1C223KBQ	C.CAPACITOR CH 16V 0.022U	1	
C7002	ECJ0EB1E102K	C.CAPACITOR CH 25V 1000P	1	
C7003	ECJ0WB1C103K	C.CAPACITOR CH 16V 0.01U	1	
C7004	F2AZZ7500002	ELECTROLYTIC CAPACITOR	1	
C7006	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C7010	F1H1C105A095	C.CAPACITOR 16V 1U	1	
C7099	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
D491	MA132WA	DIODE	1	MA3S132D
D6801	B3AAB0000037	LED	1	
D6802	B3GA00000037	PHOTO DIODE	1	
D7003	B0ECKT000001	DIODE	1	
D7004	MA5Z300-L	DIODE	1	
FP4801	K1MN26A00043	CONNECTOR 26P	1	
FP6501	VJS4297B006	CONNECTOR (FEMALE) 6P	1	K1MN06B00057
FP7002	VJS3971D027	CONNECTOR (FEMALE) 27P	1	K1MN27B00008
IC4801	NJM2115VA	IC	1	C0ABBB000106
IC7001	C0JBAA000115	LOGIC IC	1	
IC7003	B1JBLP000004	TRANSISTOR	1	
IR6401	PNA4618M05VT	IR RECEIVER UNIT	1	
L7001	G1C560MA0024	CHIP INDUCTOR 56UH	1	
Q491	2SD1030	TRANSISTOR	1	
Q492	B1ABBE000002	TRANSISTOR	1	
Q4803	2SD1819A0L	TRANSISTOR	1	
Q7001	B1BDDG000007	TRANSISTOR	1	
Q7002	2SB1462JHL	TRANSISTOR	1	
Q7003	B1ABBE000002	TRANSISTOR	1	
QR7001	UN921F	TRANSISTOR	1	
R491	ERJ2GEJ225X	M.RESISTOR CH 1/16W 2.2M	1	ERJ2RMJ225X
R492	ERJ2GEJ334X	M.RESISTOR CH 1/16W 330K	1	ERJ2RMJ334X
R493	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	1	ERJ2RMJ472X
R494	ERJ2GEJ182	M.RESISTOR CH 1/16W 1.8K	1	
R495	ERJ3GEYJ106	M.RESISTOR CH 1/16W 10M	1	
R4801	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R4802	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R4803	ERJ2GEJ683X	M.RESISTOR CH 1/16W 68K	1	ERJ2RMJ683X
R4804	ERJ2GEJ683X	M.RESISTOR CH 1/16W 68K	1	ERJ2RMJ683X

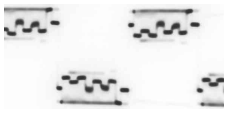
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R4805	ERJ2GEJ394X	M.RESISTOR CH 1/16W 390K	1	ERJ2RMJ394X
R4806	ERJ2GEJ394X	M.RESISTOR CH 1/16W 390K	1	ERJ2RMJ394X
R4813	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1	
R4814	ERJ2GEJ333X	M.RESISTOR CH 1/16W 33K	1	ERJ2RMJ333X
R4815	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	1	ERJ2RMJ472X
R6401	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	1	
R6402	ERJ3GEYJ470V	M.RESISTOR CH 1/16W 47	1	
R6803	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R7001	ERJ6GEYJ330V	M.RESISTOR CH 1/10W 33	1	
R7002	ERJ2GEJ393X	M.RESISTOR CH 1/16W 39K	1	ERJ2RMJ393X
R7003	ERJ2GEJ222	M.RESISTOR CH 1/16W 2.2K	1	
R7004	ERJ2GEJ822X	M.RESISTOR CH 1/16W 8.2K	1	ERJ2RMJ822X
R7005	ERJ2GEJ334X	M.RESISTOR CH 1/16W 330K	1	ERJ2RMJ334X
R7006	ERJ2GEJ564X	M.RESISTOR CH 1/16W 560K	1	ERJ2RMJ564X
R7008	ERJ2GEJ330X	M.RESISTOR CH 1/16W 33	1	
R7010	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
R7018	ERJ2GEJ681X	M.RESISTOR CH 1/16W 680	1	ERJ2RMJ681X
R7019	ERJ2GEJ220X	M.RESISTOR CH 1/16W 22	1	ERJ2RMJ220X
R7022	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R7098	ERJ2GE0R00Y	M.RESISTOR CH 1/16W 0	1	
R7099	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	1	
S7001	K0L1BA000071	SWITCH	1	
T7001	G5DYA0000033	SWITCHING TRANSFORMER	1	G5DYA0000032
VZ4801	D4ED1270A003	TRANSIENT/SURGE ABSORBER	1	
VZ4802	D4ED1270A003	TRANSIENT/SURGE ABSORBER	1	

14. Schematic Diagram for printing with A4

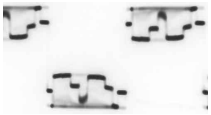
INITIAL/LOGO		ABBREVIATIONS
	RENCF	Lens Control (Forward)
	RENCR	Lens Control (Reverse)
	RERASE	Rotary Erase Head
	RGBIV1-2	1V Inverted Signal 1-2
	RGO R/G OFF	Offset Voltage for AWT R
	RSF	Capstan Direction (Reverse / Stop / Forward)
	RST	Reset
	RSTB	R Strobe
	RSTPWD	Reset Power Down Input
	RSTR	Reset Read
	RSTW	Reset Write
	RT	Saw Tooth Terminal
	RVCO	Resister for Oscillation
	RW	Read Write
	RWAE	Read Write Enable
S	S PHOT	Supply Photo Transistor
	S/H	Sampling Hold
	S/S	Start/Stop
	SBD	Serial Data
	SBI	Serial Data Input
	SBO	Serial Data Output
	SBT	Serial Clock
	SCAN0-5	Key Scan 0-5
	SCK	Serial Clock
	SCR	Search
	SCR, S.C.R.	Still Cue Review
	SEG.	Segment
	SET	White Balance Set
	SH/IRIS	Shutter/Iris Control
	SHIFT	Capasitor for Phase Shift
	SI	Serial Data Input
	SIC	Shift In Clock Input
	SIOC	Serial In/Out Control
	SMCE	Shaffling Memory Chip Enable
	SMRS	Shaffling Memory Read Strobe
	SMWE	Shaffling Memory Write Enable
	SMWS	Shaffling Memory Read Strobe
	SNAP	Snap Shot
	SNS LED	Sensor LED
	SO	Serial Data Output
	SPA	ATF Smapling Pulse
	SPEN	8 Bit Shift Register Enable
	SPK	Speaker
	SPO	Reset for Switcing Power
	SPST	8 Bit Shift Register Strobe
	SREELP	Supply Reel Pulse
	SRT	Start
	SSA	Start Sync block Area
	SSW	Select Signal for Low Pass Filter
	ST5V	Safety Tab 5V
	STAB	Safety Tab Switch
	STB	Stand by Signal
	STB	Strobe
	SWB	Switching Pre-Drive Pulse
	SYL EC	Cylinder Torque Control
	SYL FG	Cylinder FG
T	T PHOT	Take-up Photo Transistor
	TBC	Time Base Conntrol
	TFT	Thim Film Transistor
	TH	Thermostat for Battery
	TI	Test Mode Select
	TL	Torque Limit
	TM	Sub Code
	TMD	Sub Code Data
	TRE	Tracking Error Signal
	TREEL(P)	Take-up Reel (Pulse)
	TRFIX	Tracking Fix
	TRIWAVE	Tracking Wave
	TRP	Tracking Position
	TRP	Trap
	TSR	Head Switching Refference
	TST	Time Scale Transfer
U	U/V SEL	R-Y/B-Y Select Signal
	UNLOAD	Un-Loading
	UNRE	Microprocessor Read Enable
	UNWE	Microprocessor Write Enable
	UV	R-Y/B-Y
	UV SEL	R-Y/B-Y Select Signal
V	V1-V4	V. CCD Drive Pulse
	VB	VH Filter Switching
	VCE	Power Terminal
	VCNTL	Video Control
	VCO	Voltage Control Oscillator
	VCP	Shift Clock Output for Vertical Drive
	VCTLD	Video Control
	VCTRL	Voltage Charge Control
	VD	Vertical Drive Pulse
	VDDX	X Drive Power for Colour LCD
	VDDXY	XY Drive Power for Colour LCD
	VDDY	Y Drive Power for Colour LCD
	VDREC	Video Delayed Rec
	Vgg	Voltage for Gate IC
	Vgl	Gate off Voltage
	VID	Video Signal Out
	VIN	Video In
	VITC	Vertical Interval Time Code
	VITERBI	One of Signal Detection Method
	VL	Low Voltage
	VLC	Variable Length Cording
	VLOCKP	Artificial Sync Pulse
	VLP	Artificial Sync Pulse
	VM	Motor Voltage
	VMD	Velocity Mode Data
	VMD1-3	Electric Shutter Mode

INITIAL/LOGO		ABBREVIATIONS
	VMODE	NTSC/PAL Select Switch
	VMVH	VH Filter Switching
	VORP	Video Overlap
	VRB	Voltage Refference Bottom
	VRBS	Voltage Refference Bottom Output
	VREF1R3V	Refference Voltage 1.3V
	VREF3R3V	Refference Voltage 3.3V
	VREFH	Refference Voltage High Side
	VREFL	Refference Voltage Low Side
	VRI	Refference Voltage Input
	VRO	Refference Voltage Output
	VRT	Voltage Refference Top
	VRTS	Voltage Refference Top Output
	VS	Switching Comparator
	VSS	Vertical Sync Signal
	VSSX	X Driver Power for Colour LCD
	VSSXY	X-Y Driver Power for Colour LCD
W	W/N	Mode Select for Window Mode
	W/N	Wide / Normal
	WAD	Write Address Enable
	WAE	Write Address Enable
	WAERAE	Write Address Enable
	WARI	Interrupt
	WB	White Balance
	WE	Write Enable
	WEM	Memory Write Enable
	WHD	Wide Horizontal Drive Pulse
	WIDE A	Wide Zoom
	WSB	B AGC Control
	WSR	R AGC Control
	WTV	Wide TV
X	XP	FG Logic Reset
Y	Y FM0-7	Y Field Memory 0-7
	YCE	Cylinder Error Code
	YGC	Y Gain Control
	YMO 0-7	Y Field Memory 0-7
	YNCST	Noize Canceller
	YNR	Luminance Noise Reduction
	YSDP 0-7	Digital Y Out 0-7
Z	Z.ENC	Zoom Encoder
	Z.MIC	Zoom Mic
	ZENC	Zoom Encoder Output
	ZMDIR	Zoom Drive
	ZMEN	Zoom Enable
	ZMT	Zoom Motor Tele Side
	ZMT (+)/(–)	Zoom Motor (+)/(–)
	ZMTER	Zoom Motor Tele Side
	ZMW	Zoom Motor Wide Side
	ZSW	Zoom Switch

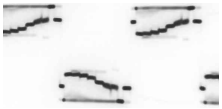
INITIAL/LOGO	ABBREVIATIONS



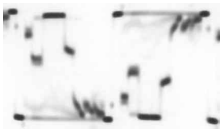
FP801-13 REC/PLAY
3.0Vp-p (20usec.div.)



FP801-14 REC/PLAY
3.0Vp-p (20usec.div.)

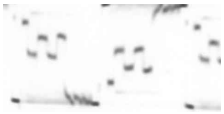


FP801-15 REC/PLAY
3.0Vp-p (20usec.div.)

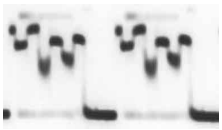


IC901-30 REC/PLAY
6.4Vp-p (20usec.div.)

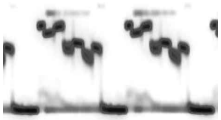
IC901-33 REC/PLAY
6.0Vp-p (20usec.div.)



IC901-35 REC/PLAY
6.4Vp-p (20usec.div.)



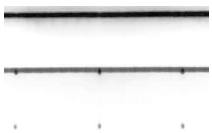
IC901-42 REC/PLAY
0.4Vp-p (20usec.div.)



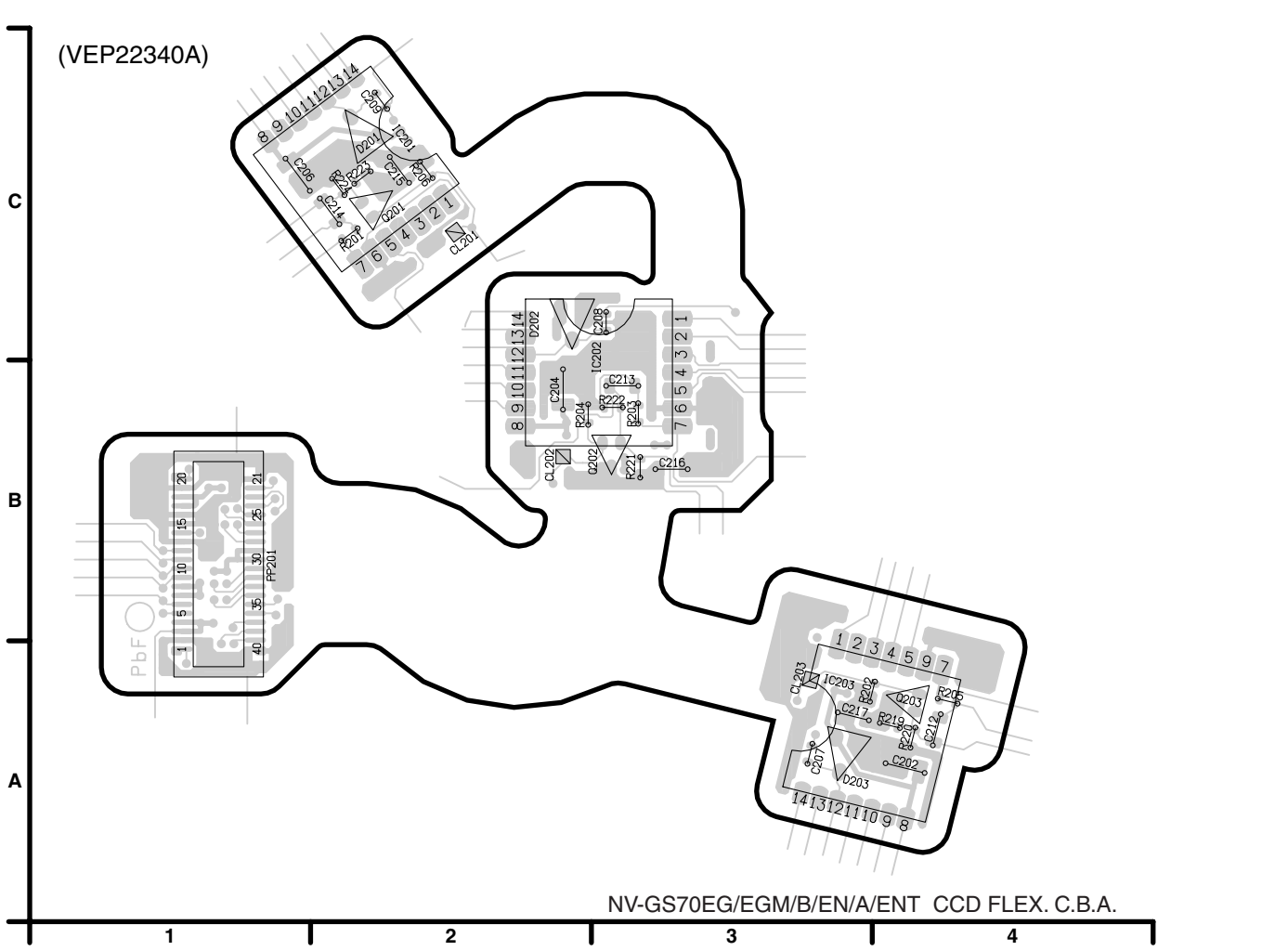
IC901-43 REC/PLAY
0.4Vp-p (20usec.div.)

IC901-44 REC/PLAY
0.4Vp-p (20usec.div.)

IC901-46 REC/PLAY
1.8Vp-p (5msec.div.)

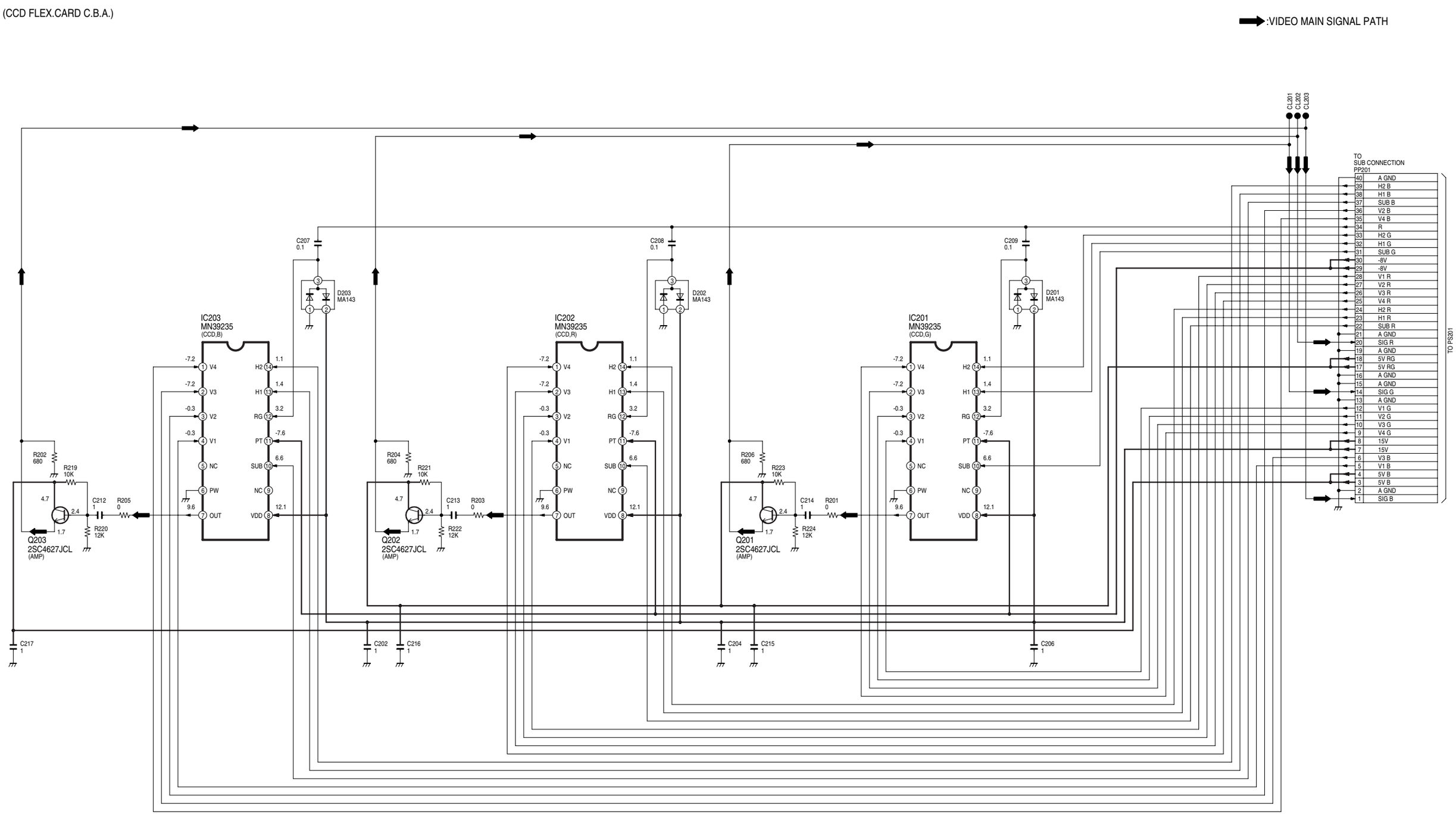


IC901-47 REC/PLAY
1.8Vp-p (5msec.div.)


(VEP22340A)
C
B
A
1
2
3
4
NV-GS70EG/EGM/B/EN/A/ENT CCD FLEX. C.B.A.

(CCD FLEX.CARD C.B.A.)

:VIDEO MAIN SIGNAL PATH

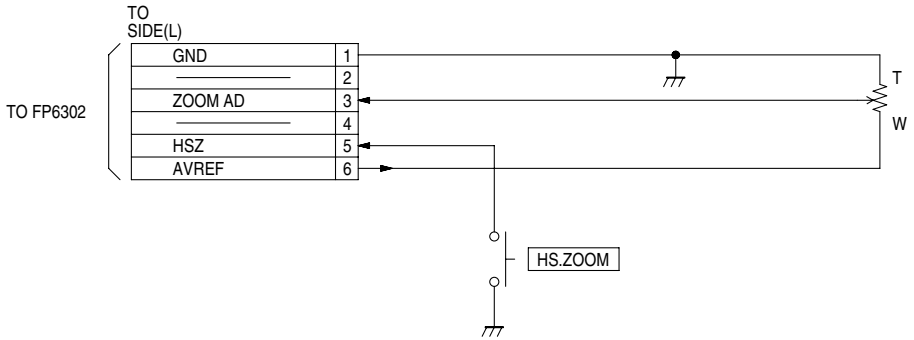


NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NV-GS70EG/EGM/B/EN/A/ENT
CCD FLEX. SCHEMATIC DIAGRAM

(CASSETTE COVER UNIT)



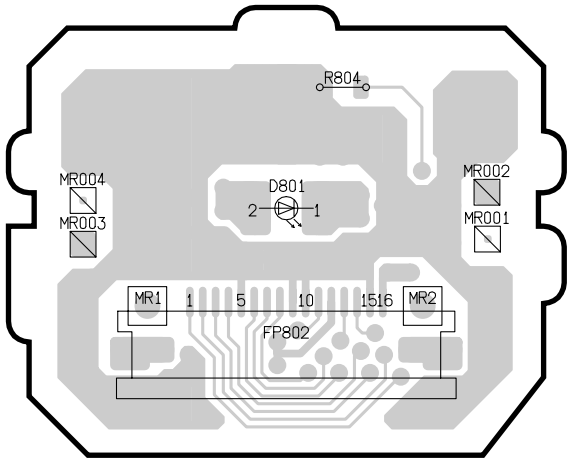
NV-GS70EG/EGM/B/EN/A/ENT
CASSETTE COVER UNIT SCHEMATIC DIAGRAM

B

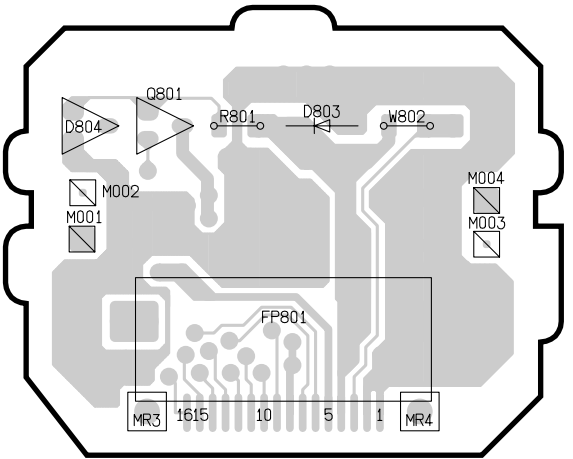
A

1 2 3 4

(VEP28300B)



(COMPONENT SIDE)



(FOIL SIDE)

NV-GS70EG/EGM/B/EN/A/ENT
EVF C.B.A.

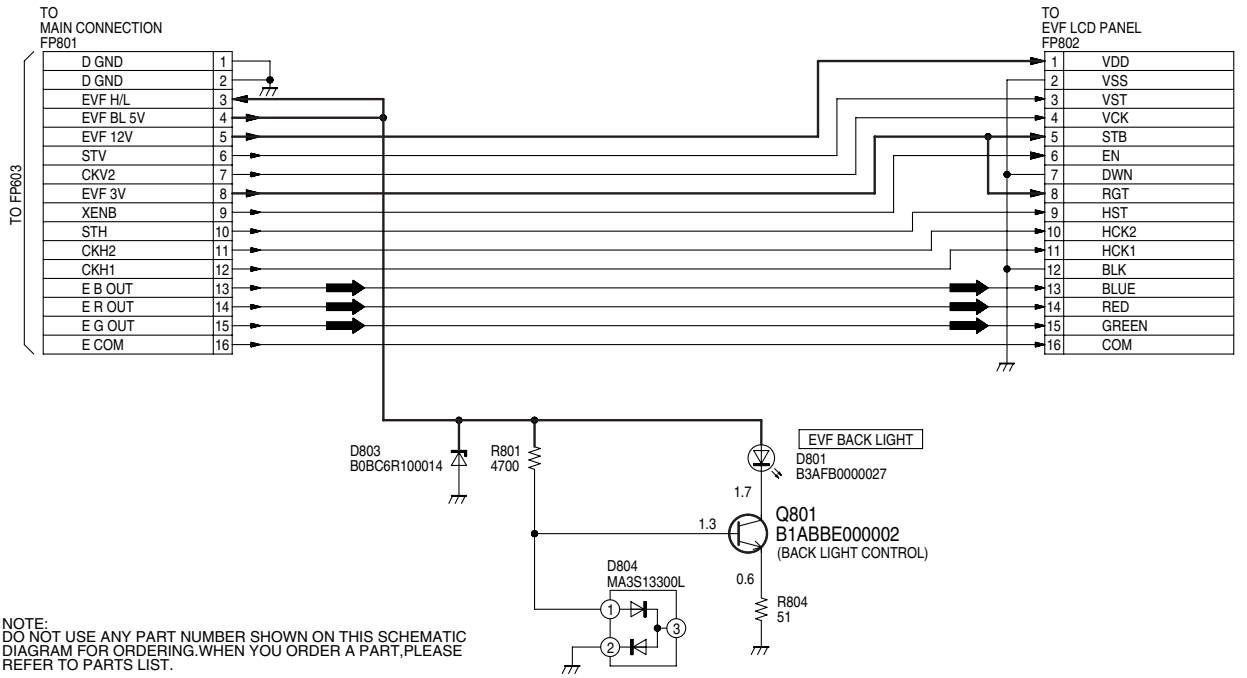
B

A

1 2 3 4 5

(EVF C.B.A.)

:VIDEO MAIN SIGNAL PATH



NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

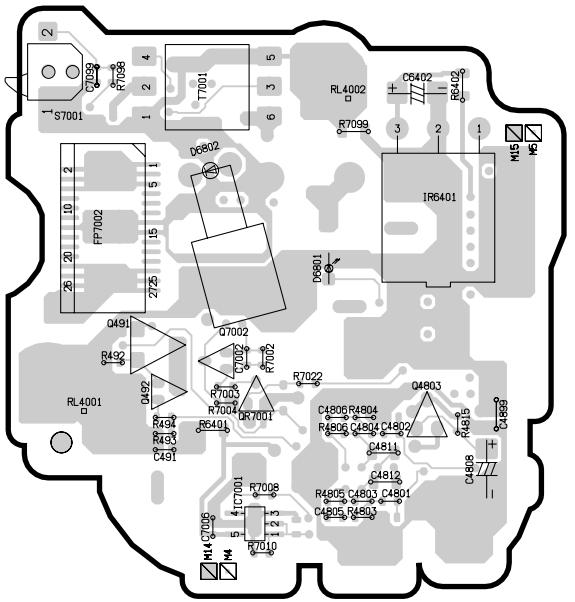
NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.(EVF:ON)

NV-GS70EG/EGM/B/EN/A/ENT
EVF SCHEMATIC DIAGRAM

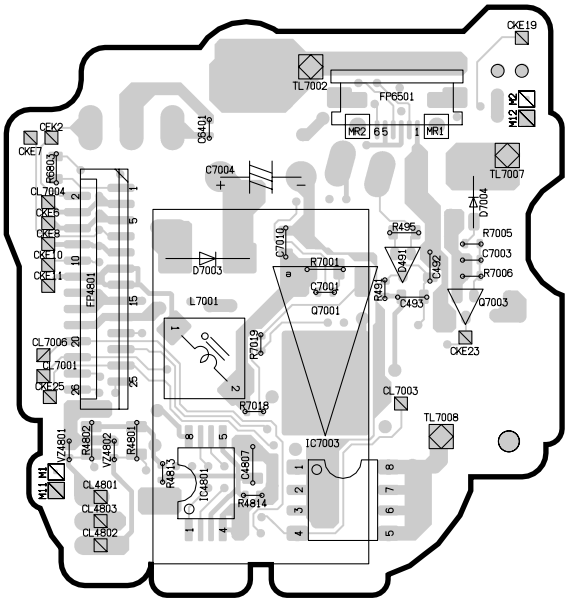
C B A

1 2 3 4

(VEP04836A)



(COMPONENT SIDE)



(FOIL SIDE)

NV-GS70EG/EGM/B/EN/A/ENT
FRONT C.B.A.

(FRONT C.B.A.)

:AUDIO MAIN SIGNAL PATH

TO FLASH FLEX. FP7002

KCENON(K)	27
KCENON(K)	26
KCENON(K)	25
KCENON(K)	24
KCENON(K)	23
KCENON(K)	22
	21
	20
	19
	18
	17
	16
GND G	15
GND G	14
GND G	13
	12
	11
	10
	9
	8
	7
KCENON(A)	6
KCENON(A)	5
KCENON(A)	4
KCENON(A)	3
KCENON(A)	2
KCENON(A)	1

TL7008
R7098 0
FLASH OPEN
S7001 K0L1BA000071
C7099 0.1
C7001 0.022
R7001 33
Q7001 B1BDDG000007 (SWITCHING)
T7001 G5DYA0000033
C7010 1
L7001 56u
R7018 680
R7019 22
D7003 B0ECKT000001
D7004 MA5Z300-L
C7004 F2AZZ7500002
TL7007
C7002 0.001
R7002 39K
R7003 2200
QR7001 UN921F (INV.)
Q7002 2SB1462JHL (POWER CONTROL)
R7004 8200
R7022 1K
R7005 330K
C7003 0.01
R7006 560K
Q7003 B1ABBE000002 (POWER CONTROL)
IC7003 B1JBLP000004 (FLASH DRIVE)
CL7004
CL7003
R7008 33
IC7001 C0JBAA000115
CL7006
R7010 47K
C7006 0.1
TL7002
CL7001
D6801 B3AAB0000037
TALLY
R6803 330

MIC UNIT

M4801 WM-58A112A
ECM(R)
M4802 WM-58A112A
ECM(L)
CL4802
CL4801
CL4803
VZ4802 D4ED1270A003
VZ4801 D4ED1270A003
R4801 3900
R4802 3900
C4801 0.01
C4803 3300P
C4812 1
R4813 22K
Q4803 2SD1819A0L (REG.5V)
R4815 4700
C4808 6V22
R4803 68K
C4805 0.01
R4805 390K
C4807 4.7
R4814 33K
IC4801 C0ABBB000106 (MIC AMP)
GND
VCC
C4802 0.01
C4806 0.01
R4806 390K
C4811 1
C4804 3300P
R4804 68K

TO FRAME GND2
RL4002
R7099 0
C4899 1

C491 0.1
R491 2.2M
R495 10M
C493 0.22
C492 0.22
D6802 B3GA00000037
D491 MA3S132D
Q491 2SD103 (AMP)
Q492 B1ABBE000002 (AMP)
R492 330K
R494 1800
R493 4700
R6401 0
IR6401 PNA4618M05VT (IR RECEIVER)
VCC
GND
OUT
R6402 47
C6401 0.1
C6402 6V22

TO MAIN/SUB CONNECTION FP4801

1	TALLY	FP6505-21
2	REMOCON	FP6505-20
3	REG A5V	FP6505-19
4	REG A5V	FP6505-19
5	MIC GND	FP6505-18,17
6	MIC GND	FP6505-18,17
7	MIC(L)	FP6505-16
8	MIC 5V	FP6505-14,15
9	MIC 5V	FP6505-14,15
10	MIC(R)	FP6505-13
11	ST NOREG	FP6505-5,6,7
12	ST NOREG	FP6505-5,6,7
13	ST NOREG	FP6505-5,6,7
14	NOREG GND	FP6505-3,4
15	NOREG GND	FP6505-3,4
16	NOREG GND	FP6505-3,4
17	D GND	FP4005-1,2
18	D GND	FP4002-1,2
19	F OPEN	FP4002-3
20	TRIG END	FP4002-4
21	CHA END	FP4002-5
22	CHARGE	FP4002-6
23	IR OUT	FP4002-7
24	MF L1	FP4002-8
25	MF L2	FP4002-9
26	MF LED	FP4002-10

TO MAIN CONNECTION FP6505
TO SUB CONNECTION FP4002

TO MF SENSOR FP6501

1	GND
2	MF L1
3	MF VCC
4	MF L2
5	MF VCC
6	MF LED

RL4001
TO FRAME GND1

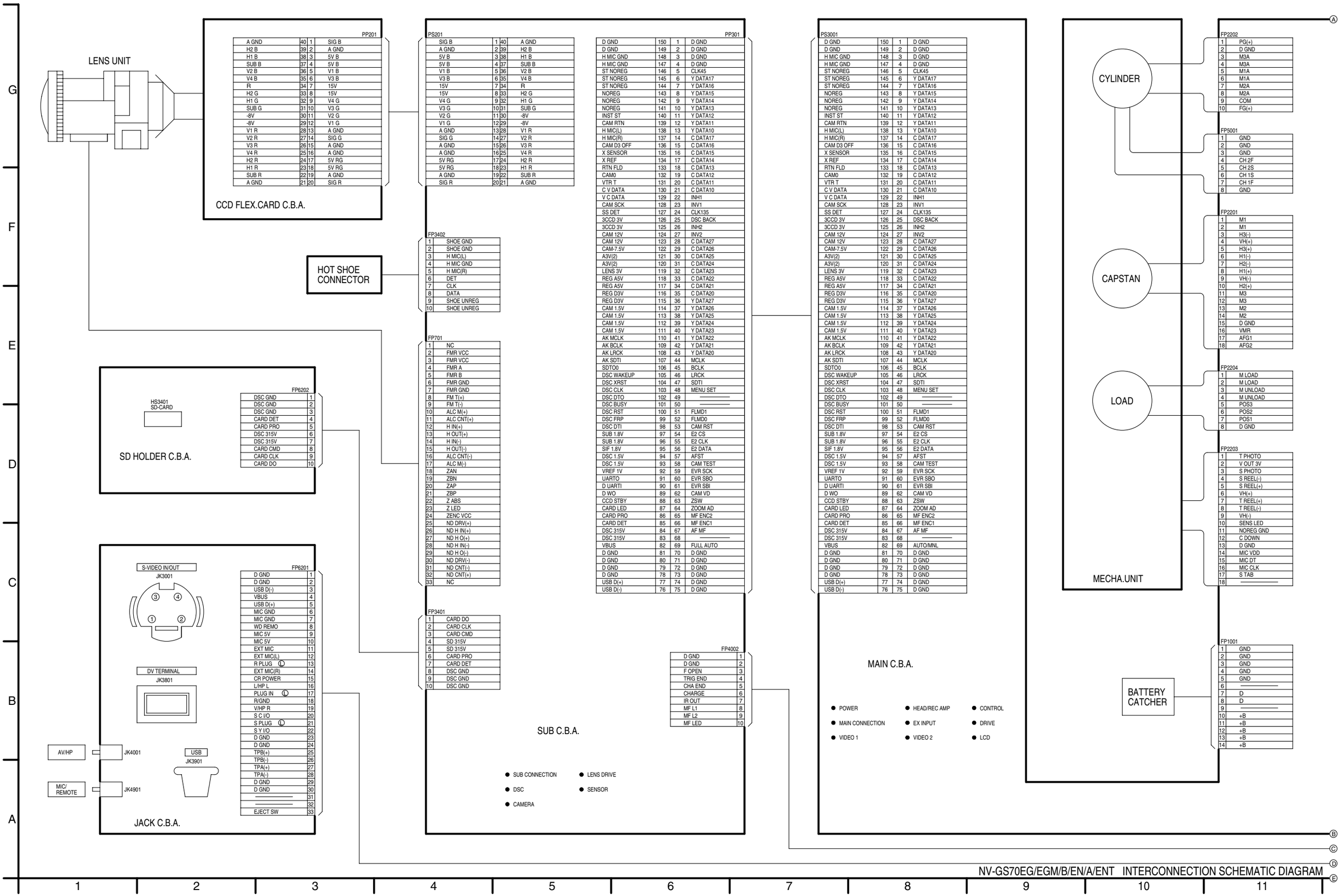
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

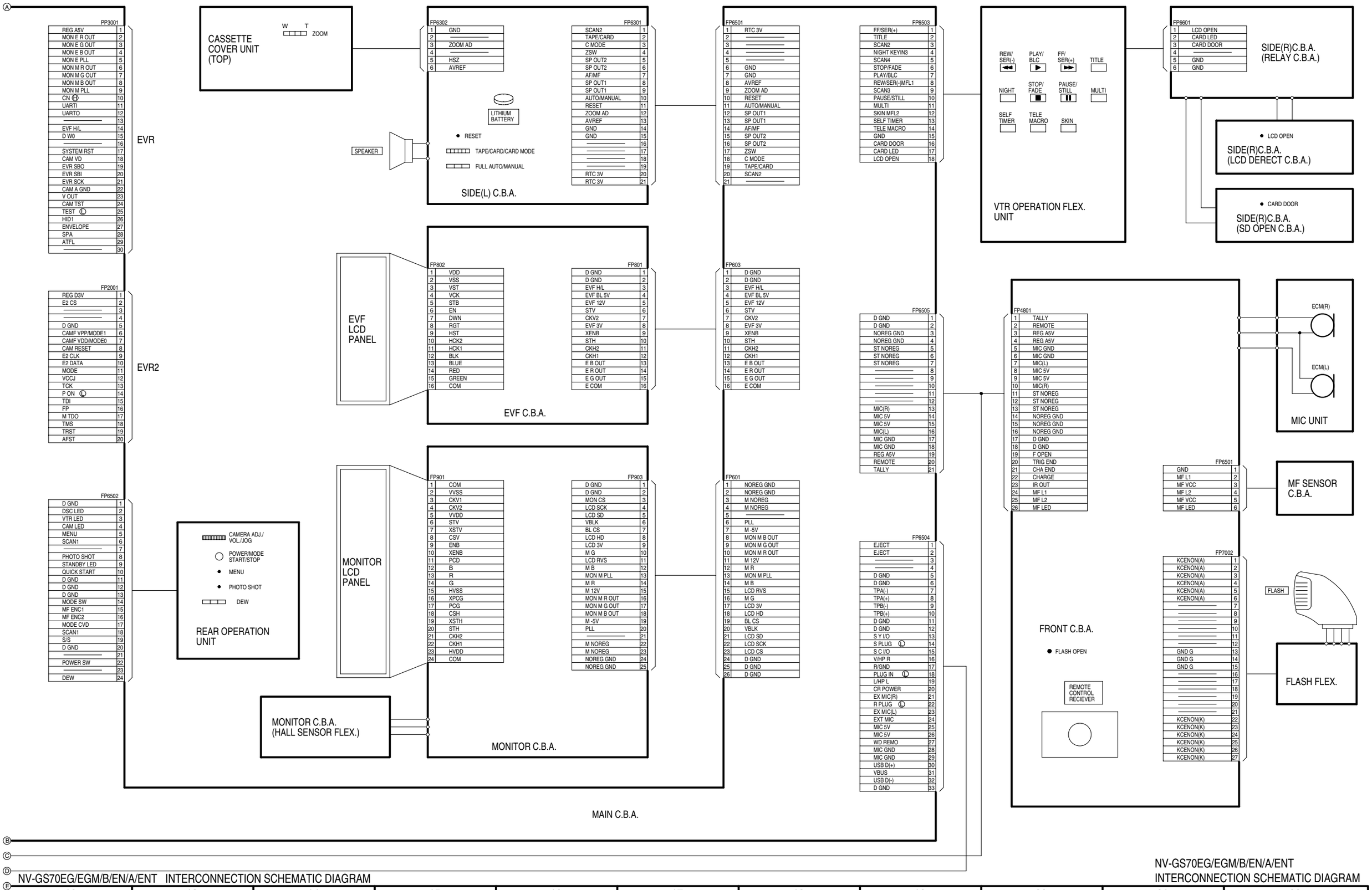
NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS PLAYBACK MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE.
(SP MODE)

NV-GS70EG/EGM/B/EN/A/ENT
FRONT SCHEMATIC DIAGRAM

F E D C B A

1 2 3 4 5 6 7 8 9


LENS UNIT
CCD FLEX.CARD C.B.A.
PP201
A GND 40 1 SIG B
H2 B 39 2 A GND
H1 B 38 3 5V B
SUB B 37 4 5V B
V2 B 36 5 V1 B
V4 B 35 6 V3 B
R 34 7 15V
H2 G 33 8 15V
H1 G 32 9 V4 G
SUB G 31 10 V3 G
-8V 30 11 V2 G
-8V 29 12 V1 G
V1 R 28 13 A GND
V2 R 27 14 SIG G
V3 R 26 15 A GND
V4 R 25 16 A GND
H2 R 24 17 5V RG
H1 R 23 18 5V RG
SUB R 22 19 A GND
A GND 21 20 SIG R
PS201
SIG B 1 40 A GND
A GND 2 39 H2 B
5V B 3 38 H1 B
5V B 4 37 SUB B
V1 B 5 36 V2 B
V3 B 6 35 V4 B
15V 7 34 R
15V 8 33 H2 G
V4 G 9 32 H1 G
V3 G 10 31 SUB G
V2 G 11 30 -8V
V1 G 12 29 -8V
A GND 13 28 V1 R
SIG G 14 27 V2 R
A GND 15 26 V3 R
A GND 16 25 V4 R
5V RG 17 24 H2 R
5V RG 18 23 H1 R
A GND 19 22 SUB R
SIG R 20 21 A GND
PP301
D GND 150 1 D GND
D GND 149 2 D GND
H MIC GND 148 3 D GND
H MIC GND 147 4 D GND
ST NOREG 146 5 CLK45
ST NOREG 145 6 Y DATA17
ST NOREG 144 7 Y DATA16
NOREG 143 8 Y DATA15
NOREG 142 9 Y DATA14
NOREG 141 10 Y DATA13
INST ST 140 11 Y DATA12
CAM RTN 139 12 Y DATA11
H MIC(L) 138 13 Y DATA10
H MIC(R) 137 14 C DATA17
CAM D3 OFF 136 15 C DATA16
X SENSOR 135 16 C DATA15
X REF 134 17 C DATA14
RTN FLD 133 18 C DATA13
CAM0 132 19 C DATA12
VTR T 131 20 C DATA11
C V DATA 130 21 C DATA10
V C DATA 129 22 INH1
CAM SCK 128 23 INV1
SS DET 127 24 CLK135
3CCD 3V 126 25 DSC BACK
3CCD 3V 125 26 INH2
CAM 12V 124 27 INV2
CAM 12V 123 28 C DATA27
CAM-7.5V 122 29 C DATA26
A3V(2) 121 30 C DATA25
A3V(2) 120 31 C DATA24
LENS 3V 119 32 C DATA23
REG A5V 118 33 C DATA22
REG A5V 117 34 C DATA21
REG D3V 116 35 C DATA20
REG D3V 115 36 Y DATA27
CAM 1.5V 114 37 Y DATA26
CAM 1.5V 113 38 Y DATA25
CAM 1.5V 112 39 Y DATA24
CAM 1.5V 111 40 Y DATA23
AK MCLK 110 41 Y DATA22
AK BCLK 109 42 Y DATA21
AK LRCK 108 43 Y DATA20
AK SDTI 107 44 MCLK
SDTO0 106 45 BCLK
DSC WAKEUP 105 46 LRCK
DSC XRST 104 47 SDTI
DSC CLK 103 48 MENU SET
DSC DTO 102 49 ———
DSC BUSY 101 50 ———
DSC RST 100 51 FLMD1
DSC FRP 99 52 FLMD0
DSC DTI 98 53 CAM RST
SUB 1.8V 97 54 E2 CS
SUB 1.8V 96 55 E2 CLK
SIF 1.8V 95 56 E2 DATA
DSC 1.5V 94 57 AFST
DSC 1.5V 93 58 CAM TEST
VREF 1V 92 59 EVR SCK
UARTO 91 60 EVR SBO
D UARTI 90 61 EVR SBI
D WO 89 62 CAM VD
CCD STBY 88 63 ZSW
CARD LED 87 64 ZOOM AD
CARD PRO 86 65 MF ENC2
CARD DET 85 66 MF ENC1
DSC 315V 84 67 AF MF
DSC 315V 83 68 ———
VBUS 82 69 FULL AUTO
D GND 81 70 D GND
D GND 80 71 D GND
D GND 79 72 D GND
D GND 78 73 D GND
USB D(+) 77 74 D GND
USB D(-) 76 75 D GND
PS3001
D GND 150 1 D GND
D GND 149 2 D GND
H MIC GND 148 3 D GND
H MIC GND 147 4 D GND
ST NOREG 146 5 CLK45
ST NOREG 145 6 Y DATA17
ST NOREG 144 7 Y DATA16
NOREG 143 8 Y DATA15
NOREG 142 9 Y DATA14
NOREG 141 10 Y DATA13
INST ST 140 11 Y DATA12
CAM RTN 139 12 Y DATA11
H MIC(L) 138 13 Y DATA10
H MIC(R) 137 14 C DATA17
CAM D3 OFF 136 15 C DATA16
X SENSOR 135 16 C DATA15
X REF 134 17 C DATA14
RTN FLD 133 18 C DATA13
CAM0 132 19 C DATA12
VTR T 131 20 C DATA11
C V DATA 130 21 C DATA10
V C DATA 129 22 INH1
CAM SCK 128 23 INV1
SS DET 127 24 CLK135
3CCD 3V 126 25 DSC BACK
3CCD 3V 125 26 INH2
CAM 12V 124 27 INV2
CAM 12V 123 28 C DATA27
CAM-7.5V 122 29 C DATA26
A3V(2) 121 30 C DATA25
A3V(2) 120 31 C DATA24
LENS 3V 119 32 C DATA23
REG A5V 118 33 C DATA22
REG A5V 117 34 C DATA21
REG D3V 116 35 C DATA20
REG D3V 115 36 Y DATA27
CAM 1.5V 114 37 Y DATA26
CAM 1.5V 113 38 Y DATA25
CAM 1.5V 112 39 Y DATA24
CAM 1.5V 111 40 Y DATA23
AK MCLK 110 41 Y DATA22
AK BCLK 109 42 Y DATA21
AK LRCK 108 43 Y DATA20
AK SDTI 107 44 MCLK
SDTO0 106 45 BCLK
DSC WAKEUP 105 46 LRCK
DSC XRST 104 47 SDTI
DSC CLK 103 48 MENU SET
DSC DTO 102 49 ———
DSC BUSY 101 50 ———
DSC RST 100 51 FLMD1
DSC FRP 99 52 FLMD0
DSC DTI 98 53 CAM RST
SUB 1.8V 97 54 E2 CS
SUB 1.8V 96 55 E2 CLK
SIF 1.8V 95 56 E2 DATA
DSC 1.5V 94 57 AFST
DSC 1.5V 93 58 CAM TEST
VREF 1V 92 59 EVR SCK
UARTO 91 60 EVR SBO
D UARTI 90 61 EVR SBI
D WO 89 62 CAM VD
CCD STBY 88 63 ZSW
CARD LED 87 64 ZOOM AD
CARD PRO 86 65 MF ENC2
CARD DET 85 66 MF ENC1
DSC 315V 84 67 AF MF
DSC 315V 83 68 ———
VBUS 82 69 AUTO/MNL
D GND 81 70 D GND
D GND 80 71 D GND
D GND 79 72 D GND
D GND 78 73 D GND
USB D(+) 77 74 D GND
USB D(-) 76 75 D GND
HOT SHOE CONNECTOR
FP3402
1 SHOE GND
2 SHOE GND
3 H MIC(L)
4 H MIC GND
5 H MIC(R)
6 DET
7 CLK
8 DATA
9 SHOE UNREG
10 SHOE UNREG
FP701
1 NC
2 FMR VCC
3 FMR VCC
4 FMR A
5 FMR B
6 FMR GND
7 FMR GND
8 FM T(+)
9 FM T(-)
10 ALC M(+)
11 ALC CNT(+)
12 H IN(+)
13 H OUT(+)
14 H IN(-)
15 H OUT(-)
16 ALC CNT(-)
17 ALC M(-)
18 ZAN
19 ZBN
20 ZAP
21 ZBP
22 Z ABS
23 Z LED
24 ZENC VCC
25 ND DRV(+)
26 ND H IN(+)
27 ND H O(+)
28 ND H IN(-)
29 ND H O(-)
30 ND DRV(-)
31 ND CNT(-)
32 ND CNT(+)
33 NC
FP3401
1 CARD DO
2 CARD CLK
3 CARD CMD
4 SD 315V
5 SD 315V
6 CARD PRO
7 CARD DET
8 DSC GND
9 DSC GND
10 DSC GND
FP4002
D GND 1
D GND 2
F OPEN 3
TRIG END 4
CHA END 5
CHARGE 6
IR OUT 7
MF L1 8
MF L2 9
MF LED 10
SUB C.B.A.
SUB CONNECTION
DSC
CAMERA
LENS DRIVE
SENSOR
MAIN C.B.A.
POWER
MAIN CONNECTION
VIDEO 1
HEAD/REC AMP
EX INPUT
VIDEO 2
CONTROL
DRIVE
LCD
SD HOLDER C.B.A.
HS3401
SD-CARD
FP6202
DSC GND 1
DSC GND 2
DSC GND 3
CARD DET 4
CARD PRO 5
DSC 315V 6
DSC 315V 7
CARD CMD 8
CARD CLK 9
CARD DO 10
JACK C.B.A.
S-VIDEO IN/OUT
JK3001
DV TERMINAL
JK3801
AV/HP
JK4001
MIC/ REMOTE
JK4901
USB
JK3901
FP6201
D GND 1
D GND 2
USB D(-) 3
VBUS 4
USB D(+) 5
MIC GND 6
MIC GND 7
WD REMO 8
MIC 5V 9
MIC 5V 10
EXT MIC 11
EXT MIC(L) 12
R PLUG (L) 13
EXT MIC(R) 14
CR POWER 15
L/HP L 16
PLUG IN (L) 17
R/GND 18
V/HP R 19
S C I/O 20
S PLUG (L) 21
S Y I/O 22
D GND 23
D GND 24
TPB(+) 25
TPB(-) 26
TPA(+) 27
TPA(-) 28
D GND 29
D GND 30
——— 31
——— 32
EJECT SW 33
MECHA.UNIT
CYLINDER
CAPSTAN
LOAD
FP2202
1 PG(+)
2 D GND
3 M3A
4 M3A
5 M1A
6 M1A
7 M2A
8 M2A
9 COM
10 FG(+)
FP5001
1 GND
2 GND
3 GND
4 CH 2F
5 CH 2S
6 CH 1S
7 CH 1F
8 GND
FP2201
1 M1
2 M1
3 H3(-)
4 VH(+)
5 H3(+)
6 H1(-)
7 H2(-)
8 H1(+)
9 VH(-)
10 H2(+)
11 M3
12 M3
13 M2
14 M2
15 D GND
16 VMR
17 AFG1
18 AFG2
FP2204
1 M LOAD
2 M LOAD
3 M UNLOAD
4 M UNLOAD
5 POS3
6 POS2
7 POS1
8 D GND
FP2203
1 T PHOTO
2 V OUT 3V
3 S PHOTO
4 S REEL(-)
5 S REEL(+)
6 VH(+)
7 T REEL(+)
8 T REEL(-)
9 VH(-)
10 SENS LED
11 NOREG GND
12 C DOWN
13 D GND
14 MIC VDD
15 MIC DT
16 MIC CLK
17 S TAB
18 ———
BATTERY CATCHER
FP1001
1 GND
2 GND
3 GND
4 GND
5 GND
6 ———
7 D
8 D
9 ———
10 +B
11 +B
12 +B
13 +B
14 +B
A
B
C
D
E

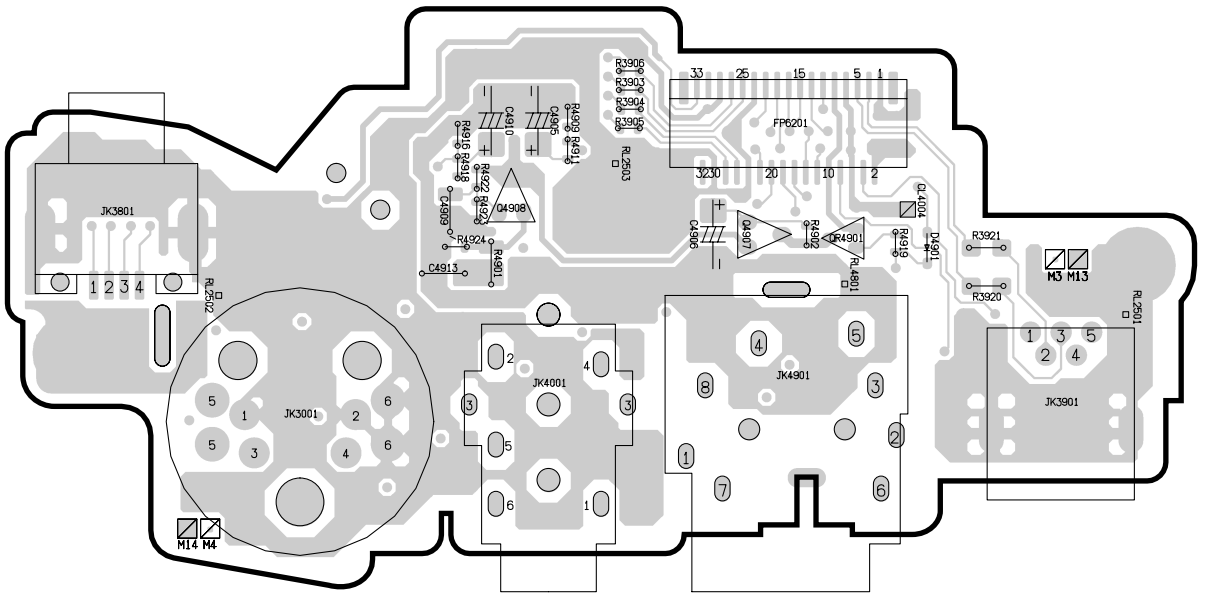

PP3001
REG A5V 1
MON E R OUT 2
MON E G OUT 3
MON E B OUT 4
MON E PLL 5
MON M R OUT 6
MON M G OUT 7
MON M B OUT 8
MON M PLL 9
CN Ⓗ 10
UARTI 11
UARTO 12
13
EVF H/L 14
D W0 15
16
SYSTEM RST 17
CAM VD 18
EVR SBO 19
EVR SBI 20
EVR SCK 21
CAM A GND 22
V OUT 23
CAM TST 24
TEST Ⓛ 25
HID1 26
ENVELOPE 27
SPA 28
ATFL 29
30
EVR
FP2001
REG D3V 1
E2 CS 2
3
4
D GND 5
CAMF VPP/MODE1 6
CAMF VDD/MODE0 7
CAM RESET 8
E2 CLK 9
E2 DATA 10
MODE 11
VCCJ 12
TCK 13
P ON Ⓛ 14
TDI 15
FP 16
M TDO 17
TMS 18
TRST 19
AFST 20
EVR2
FP6502
D GND 1
DSC LED 2
VTR LED 3
CAM LED 4
MENU 5
SCAN1 6
7
PHOTO SHOT 8
STANDBY LED 9
QUICK START 10
D GND 11
D GND 12
D GND 13
MODE SW 14
MF ENC1 15
MF ENC2 16
MODE CVD 17
SCAN1 18
S/S 19
D GND 20
21
POWER SW 22
23
DEW 24
CASSETTE COVER UNIT (TOP)
W T
ZOOM
SPEAKER
FP6302
GND 1
2
ZOOM AD 3
4
HSZ 5
AVREF 6
LITHIUM BATTERY
RESET
TAPE/CARD/CARD MODE
FULL AUTO/MANUAL
SIDE(L) C.B.A.
FP6301
SCAN2 1
TAPE/CARD 2
C MODE 3
ZSW 4
SP OUT2 5
SP OUT2 6
AF/MF 7
SP OUT1 8
SP OUT1 9
AUTO/MANUAL 10
RESET 11
ZOOM AD 12
AVREF 13
GND 14
GND 15
16
17
18
19
RTC 3V 20
RTC 3V 21
FP6501
RTC 3V 1
2
3
4
5
GND 6
GND 7
AVREF 8
ZOOM AD 9
RESET 10
AUTO/MANUAL 11
SP OUT1 12
SP OUT1 13
AF/MF 14
SP OUT2 15
SP OUT2 16
ZSW 17
C MODE 18
TAPE/CARD 19
SCAN2 20
21
FP6503
FF/SER(+) 1
TITLE 2
SCAN2 3
NIGHT KEYIN3 4
SCAN4 5
STOP/FADE 6
PLAY/BLC 7
REW/SER(-)MFL1 8
SCAN3 9
PAUSE/STILL 10
MULTI 11
SKIN MFL2 12
SELF TIMER 13
TELE MACRO 14
GND 15
CARD DOOR 16
CARD LED 17
LCD OPEN 18
REW/ SER(-)
PLAY/ BLC
FF/ SER(+)
TITLE
NIGHT
STOP/ FADE
PAUSE/ STILL
MULTI
SELF TIMER
TELE MACRO
SKIN
VTR OPERATION FLEX. UNIT
FP6601
LCD OPEN 1
CARD LED 2
CARD DOOR 3
4
GND 5
GND 6
SIDE(R)C.B.A. (RELAY C.B.A.)
LCD OPEN
SIDE(R)C.B.A. (LCD DERECT C.B.A.)
CARD DOOR
SIDE(R)C.B.A. (SD OPEN C.B.A.)
EVF LCD PANEL
FP802
VDD 1
VSS 2
VST 3
VCK 4
STB 5
EN 6
DWN 7
RGT 8
HST 9
HCK2 10
HCK1 11
BLK 12
BLUE 13
RED 14
GREEN 15
COM 16
FP801
D GND 1
D GND 2
EVF H/L 3
EVF BL 5V 4
EVF 12V 5
STV 6
CKV2 7
EVF 3V 8
XENB 9
STH 10
CKH2 11
CKH1 12
E B OUT 13
E R OUT 14
E G OUT 15
E COM 16
EVF C.B.A.
FP603
D GND 1
D GND 2
EVF H/L 3
EVF BL 5V 4
EVF 12V 5
STV 6
CKV2 7
EVF 3V 8
XENB 9
STH 10
CKH2 11
CKH1 12
E B OUT 13
E R OUT 14
E G OUT 15
E COM 16
FP6505
D GND 1
D GND 2
NOREG GND 3
NOREG GND 4
ST NOREG 5
ST NOREG 6
ST NOREG 7
8
9
10
11
12
MIC(R) 13
MIC 5V 14
MIC 5V 15
MIC(L) 16
MIC GND 17
MIC GND 18
REG A5V 19
REMOTE 20
TALLY 21
FP4801
TALLY 1
REMOTE 2
REG A5V 3
MIC GND 4
MIC(L) 5
MIC 5V 6
MIC 5V 7
MIC(R) 8
ST NOREG 9
ST NOREG 10
NOREG GND 11
NOREG GND 12
NOREG GND 13
D GND 14
D GND 15
F OPEN 16
TRIG END 17
CHA END 18
CHARGE 19
IR OUT 20
MF L1 21
MF L2 22
MF LED 23
ECM(R)
ECM(L)
MIC UNIT
FP6501
GND 1
MF L1 2
MF VCC 3
MF L2 4
MF VCC 5
MF LED 6
MF SENSOR C.B.A.
FP6504
EJECT 1
EJECT 2
3
4
D GND 5
D GND 6
TPA(-) 7
TPA(+) 8
TPB(-) 9
TPB(+) 10
D GND 11
D GND 12
S Y I/O 13
S PLUG Ⓛ 14
S C I/O 15
V/HP R 16
R/GND 17
PLUG IN Ⓛ 18
L/HP L 19
CR POWER 20
EX MIC(R) 21
R PLUG Ⓛ 22
EX MIC(L) 23
EXT MIC 24
MIC 5V 25
MIC 5V 26
WD REMO 27
MIC GND 28
MIC GND 29
USB D(+) 30
VBUS 31
USB D(-) 32
D GND 33
FP7002
KCENON(A) 1
KCENON(A) 2
KCENON(A) 3
KCENON(A) 4
KCENON(A) 5
KCENON(A) 6
7
8
9
10
11
12
GND G 13
GND G 14
GND G 15
16
17
18
19
20
21
KCENON(K) 22
KCENON(K) 23
KCENON(K) 24
KCENON(K) 25
KCENON(K) 26
KCENON(K) 27
FLASH
FLASH FLEX.
FRONT C.B.A.
FLASH OPEN
REMOTE CONTROL RECIEVER
CAMERA ADJ./ VOL./JOG
POWER/MODE START/STOP
MENU
PHOTO SHOT
DEW
REAR OPERATION UNIT
MONITOR LCD PANEL
FP901
COM 1
VVSS 2
CKV1 3
CKV2 4
VVDD 5
STV 6
XSTV 7
CSV 8
ENB 9
XENB 10
PCD 11
B 12
R 13
G 14
HVSS 15
XPCG 16
PCG 17
CSH 18
XSTH 19
STH 20
CKH2 21
CKH1 22
HVDD 23
COM 24
FP903
D GND 1
D GND 2
MON CS 3
LCD SCK 4
LCD SD 5
VBLK 6
BL CS 7
LCD HD 8
LCD 3V 9
M G 10
LCD RVS 11
M B 12
MON M PLL 13
M R 14
M 12V 15
MON M R OUT 16
MON M G OUT 17
MON M B OUT 18
M -5V 19
PLL 20
21
M NOREG 22
M NOREG 23
NOREG GND 24
NOREG GND 25
FP601
NOREG GND 1
NOREG GND 2
M NOREG 3
M NOREG 4
5
PLL 6
M -5V 7
MON M B OUT 8
MON M G OUT 9
MON M R OUT 10
M 12V 11
M R 12
MON M PLL 13
M B 14
LCD RVS 15
M G 16
LCD 3V 17
LCD HD 18
BL CS 19
VBLK 20
LCD SD 21
LCD SCK 22
LCD CS 23
D GND 24
D GND 25
D GND 26
MONITOR C.B.A.
MONITOR C.B.A. (HALL SENSOR FLEX.)
MAIN C.B.A.

Jack C.B.A.

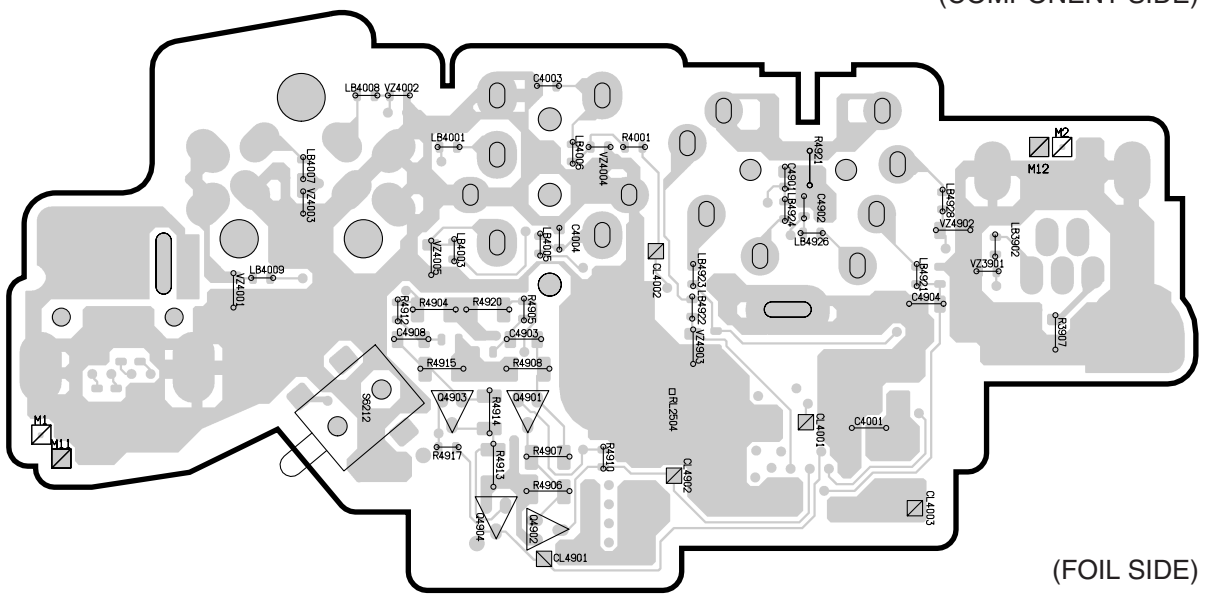
Transistor	
Q4901	A-2
Q4902	A-3
Q4903	A-2
Q4904	A-2
Q4907	D-3
Q4908	D-2
Transistor&Resistor	
QR4901	D-4
Test Point	
CL4001	A-3
CL4002	A-3
CL4003	A-4
CL4004	D-4
CL4901	A-3
CL4902	A-3
RL2501	D-4
RL2502	D-1
RL2503	D-3
RL2504	A-3
RL4801	D-4
Connector	
FP6201	D-3
Jack	
JK3001	C-2
JK3801	D-1
JK3901	C-4
JK4001	C-3
JK4901	C-3
Diode	
D4901	D-4
Absorber	
VZ3901	B-4
VZ4001	B-1
VZ4002	B-2
VZ4003	B-2
VZ4004	A-3
VZ4005	B-2
VZ4902	B-4
VZ4903	A-3
Switch	
S6212	A-2
Coil	
LB3902	B-4
LB4001	B-2
LB4003	B-2
LB4005	A-3
LB4006	A-3
LB4007	B-2
LB4008	B-2
LB4009	B-2
LB4921	B-4
LB4922	A-3
LB4923	A-3
LB4924	A-3
LB4926	A-3
LB4928	B-4
Capacitor	
C4001	A-4
C4003	B-3
C4004	A-3
C4901	B-3
C4902	B-3
C4903	B-2
C4904	B-4
C4905	D-3
C4906	D-3
C4908	B-2
C4909	D-2
C4910	D-2
C4913	D-2
Resistor	
R3903	D-3
R3904	D-3
R3905	D-3
R3906	E-3
R3907	B-4
R3920	D-4
R3921	D-4
R4001	A-3
R4901	D-2
R4902	D-3
R4904	B-2
R4905	B-2
R4906	A-3
R4907	A-3
R4908	A-2
R4909	D-3
R4910	A-3
R4911	D-3
R4912	B-2
R4913	A-2
R4914	A-2
R4915	A-2
R4916	D-2
R4917	A-2
R4918	D-2
R4919	D-4
R4920	B-2
R4921	B-3
R4922	D-2
R4923	D-2
R4924	D-2

ADDRESS INFORMATION

(VEP04837A)



(COMPONENT SIDE)



(FOIL SIDE)

NV-GS70EG/EGM/B/EN/A/ENT
JACK C.B.A.

(JACK C.B.A.)

:VIDEO MAIN SIGNAL PATH
:AUDIO MAIN SIGNAL PATH

MIC/ REMOTE
JK4901
K2HC107B0002

LB4923 J0JAC0000015
LB4924 J0JAC0000015
LB4926 J0JAC0000015
LB4921 J0JAC0000015
LB4928 J0JAC0000015
LB4922 J0JAC0000015
VZ4902 D4ED1120A002
VZ4903 D4ED1120A002

Q4908 2SD1819A0L (R.FILTER)
R4901 330
R4904 5600
C4913 4.7
R4924 47K
R4922 22K
R4923 68K
C4909 4.7
R4920 5600
C4901 4700P
R4905 470
C4902 4700P
C4903 1
R4908 56K
R4906 10K
R4907 150K
R4909 1K
Q4901 2SD2216J0L (AMP)
Q4902 2SB1462JHL (AMP)
R4910 5600
R4911 150
C4905 6V22
CL4902
C4908 1
R4912 470
R4913 10K
R4914 150K
R4915 56K
Q4903 2SD2216J0L (AMP)
R4916 1K
Q4904 2SB1462JHL (AMP)
R4917 5600
R4918 150
C4910 6V22
CL4901
Q4907 2SD1819A0L (REG.5V)
R4902 4700
C4906 6V22
QR4901 B1GDBEHH0001 (POWER SUPPLY)
4.7
R4919 0
C4904 1
D4901 MA2SD2400L

USB
JK3901
K1KA05B00141
R3907 0
R3920 0
R3921 0
LB3902 J0JAC0000014
VZ3901 D4ED12710001

S VIDEO IN/OUT
JK3001
K2HZ104A0002
LB4007 J0JBC0000054
LB4008 J0JBC0000054
VZ4002 D4ED1270A003
VZ4003 D4ED1270A003
LB4009 J0JAC0000014
VZ4001 D4ED1120A002

AV/HP
JK4001
K2HC106B0010
LB4001 J0JBC0000054
LB4005 J0JAC0000014
CL4001
LB4003 J0JAC0000014
LB4006 J0JAC0000014
R4001 100
CL4002
C4003 4700P
C4004 4700P
VZ4005 D4ED1120A002
VZ4004 D4ED12710001

DV TERMINAL
JK3801
K1FA104A0014
R3904 0
R3903 0
R3905 0
R3906 0

TO MAIN CONNECTION FP6201

1	D GND	FP6504-33
2	D GND	FP6504-33
3	USB D(-)	FP6504-32
4	VBUS	FP6504-31
5	USB D(+)	FP6504-30
6	MIC GND	FP6504-29
7	MIC GND	FP6504-28
8	WD REMO	FP6504-27
9	MIC 5V	FP6504-26
10	MIC 5V	FP6504-25
11	EXT MIC	FP6504-24
12	EXT MIC(L)	FP6504-23
13	R PLUG Ⓛ	FP6504-22
14	EXT MIC(R)	FP6504-21
15	CR POWER	FP6504-20
16	L/HP L	FP6504-19
17	PLUG IN Ⓛ	FP6504-18
18	R/GND	FP6504-17
19	V/HP R	FP6504-16
20	S C I/O	FP6504-15
21	S PLUG Ⓛ	FP6504-14
22	S Y I/O	FP6504-13
23	D GND	FP6504-12
24	D GND	FP6504-11
25	TPB(+)	FP6504-10
26	TPB(-)	FP6504-9
27	TPA(+)	FP6504-8
28	TPA(-)	FP6504-7
29	D GND	FP6504-6
30	D GND	FP6504-5
31		FP6504-4
32		FP6504-3
33	EJECT SW	FP6504-1,2

S6212
K0L1BB000022
EJECT

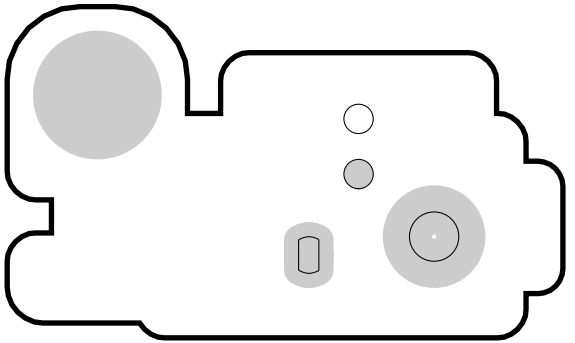
RL4801 CL4003 CL4004 RL2504 RL2503 RL2502 RL2501
TO FRAME GND
R4921 0
C4001 1

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

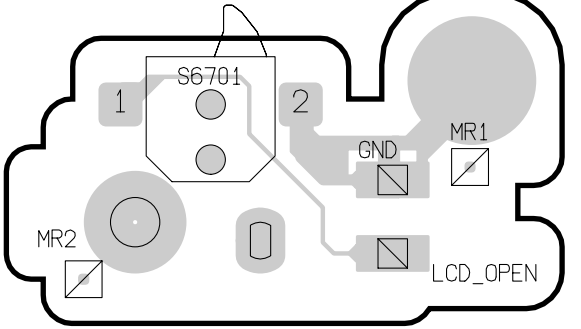
NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NV-GS70EG/EGM/B/EN/A/ENT
JACK SCHEMATIC DIAGRAM

(VEP06F29A)



(COMPONENT SIDE)



(FOIL SIDE)

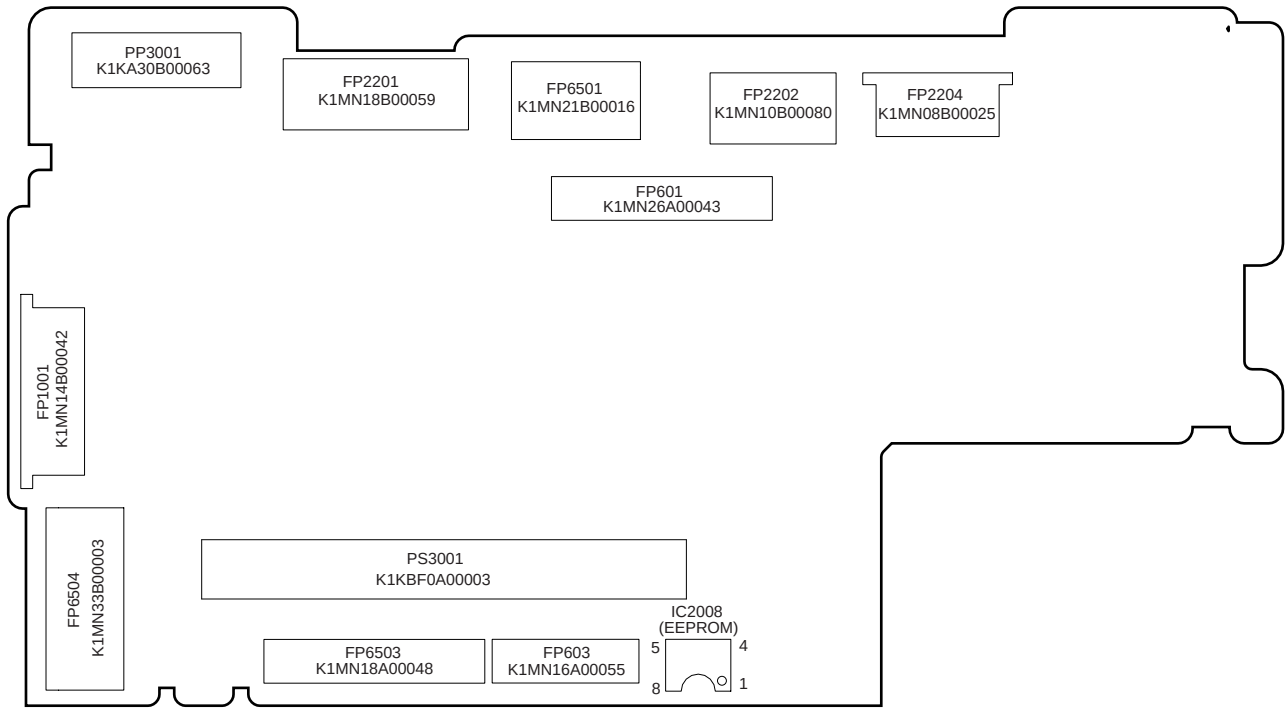
NV-GS70EG/EGM/B/EN/A/ENT
SIDE (R) (LCD DET) C.B.A.

B

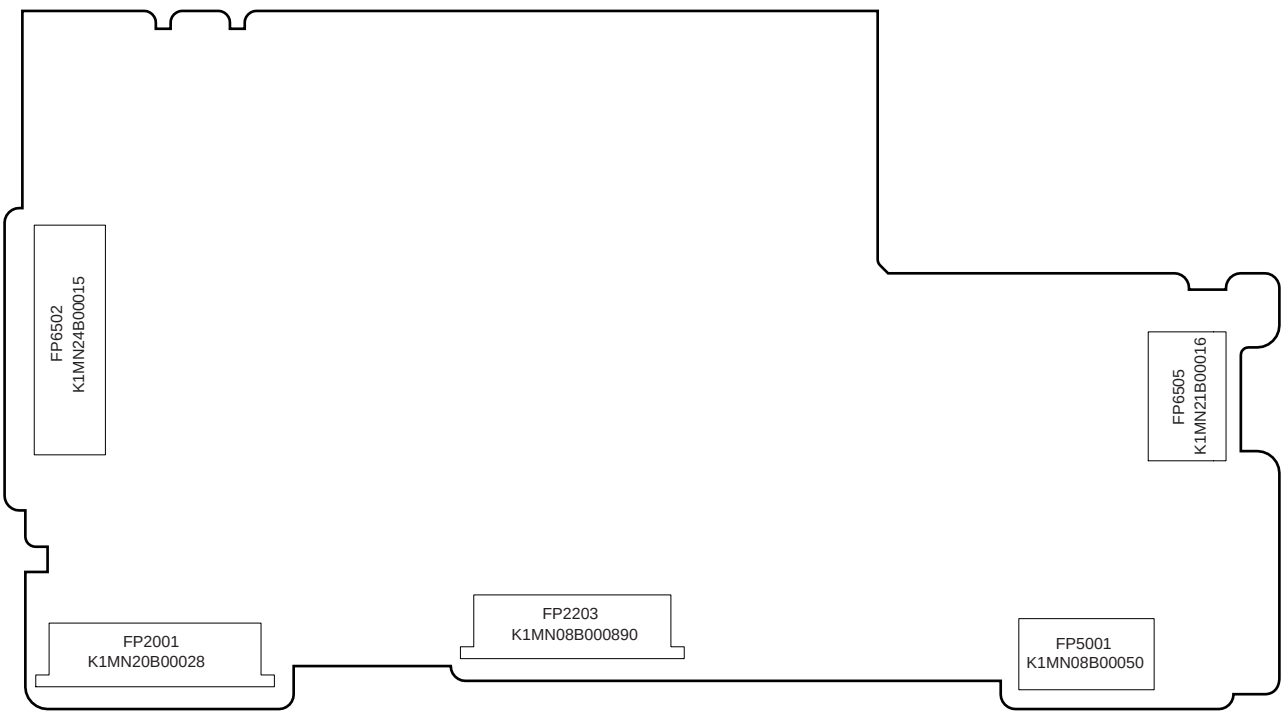
A

1 2 3 4 5

(MAIN C.B.A.)

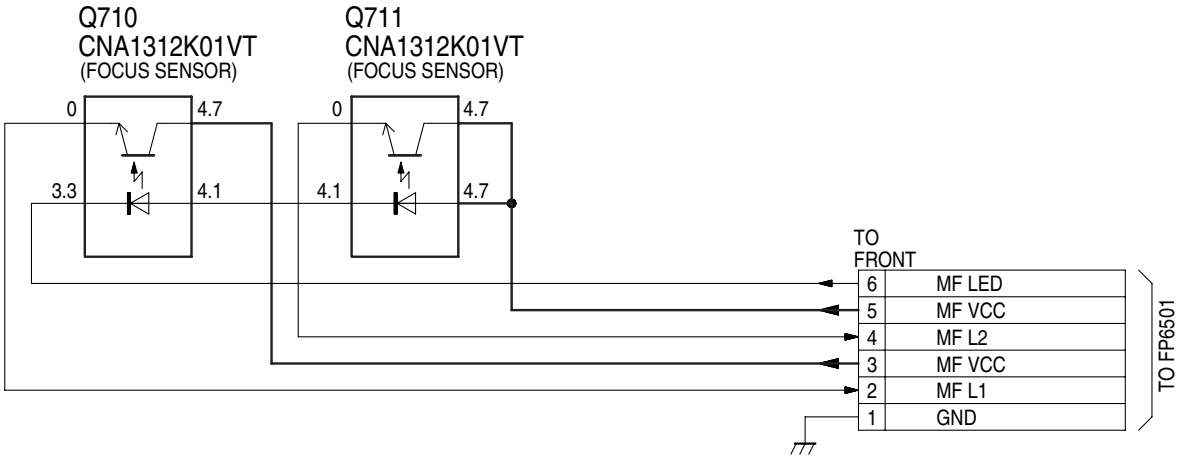


(COMPONENT SIDE)



(FOIL SIDE)

(MF SENSOR C.B.A.)



NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

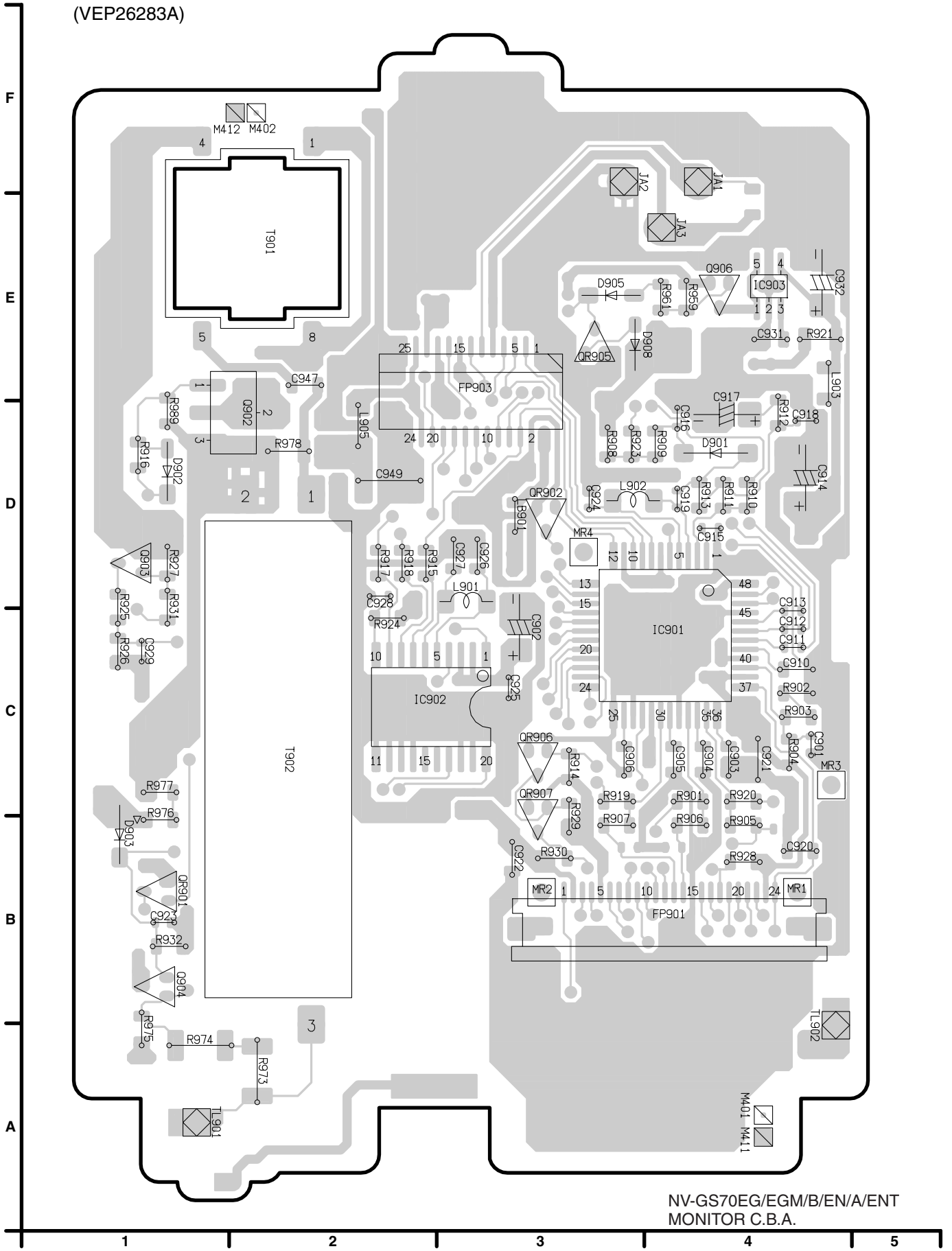
NV-GS70EG/EGM/B/EN/A/ENT
MF SENSOR SCHEMATIC DIAGRAM

Monitor C.B.A.

Integrated Circuit	
IC901	C4
IC902	C2
IC903	E4
Transistor	
Q902	D2
Q903	D1
Q904	B1
Q906	E4
Transistor&Resistor	
QR901	B1
QR902	D3
QR905	E3
QR906	C3
QR907	B3
Test Point	
TL901	A1
TL902	B4
Connector	
FP901	B4
FP903	E3
Diode	
D901	D4
D902	D1
D903	B1
D905	E3
D908	E3
Transformer	
T901	E2
T902	C2
Coil	
L901	D3
L902	D3
L903	E4
L905	D2
LB901	D3
Capasitor	
C901	C4
C902	C3
C903	C4
C904	C4
C905	C4
C906	C3
C910	C4
C911	C4
C912	C4
C913	C4
C914	D4
C915	D4
C916	D4
C917	D4
C918	D4
C919	D4
C920	B4
C921	C4
C922	B3
C923	B1
C924	D3
C925	C3
C926	D3
C927	D3
C928	D2
C929	C1
C931	E4
C932	E4
C947	E2
C949	D2
Resistor	
R901	C4
R902	C4
R903	C4
R904	C4
R905	B4
R906	B4
R907	B3
R908	D3
R909	D4
R910	D4
R911	D4
R912	D4
R913	D4
R914	C3
R915	D2
R916	D1
R917	D2
R918	D2
R919	C3
R920	C4
R921	E4
R923	D3
R924	C2
R925	D1
R926	C1
R927	D1
R928	B4
R929	B3
R930	B3
R931	D1
R932	B1
R959	E4
R961	E4
R973	A2
R974	A1
R975	A1
R976	B1
R977	C1
R978	D2
R989	D1
Jamper	
JA1	F4
JA2	F3
JA3	E4

ADDRESS INFORMATION

(VEP26283A)



NV-GS70EG/EGM/B/EN/A/ENT
MONITOR C.B.A.

(MONITOR C.B.A.)

:VIDEO MAIN SIGNAL PATH

TO MAIN CONNECTION FP903

FP601-24,25,26	D GND	1
FP601-24,25,26	D GND	2
FP601-23	LCD CS	3
FP601-22	LCD SCK	4
FP601-21	LCD SD	5
FP601-20	VBLK	6
FP601-19	BL CS	7
FP601-18	LCD HD	8
FP601-17	LCD 3V	9
FP601-16	M G	10
FP601-15	LCD RVS	11
FP601-14	M B	12
FP601-13	MON M PLL	13
FP601-12	M R	14
FP601-11	M 12V	15
FP601-10	MON M R OUT	16
FP601-9	MON M G OUT	17
FP601-8	MON M B OUT	18
FP601-7	M -5V	19
FP601-6	PLL	20
FP601-5	S 5V	21
FP601-4	M NOREG	22
FP601-3	M NOREG	23
FP601-2	NOREG GND	24
FP601-1	NOREG GND	25

TO MONITOR LCD PANEL FP901

24	COM
23	HVDD
22	CKH1
21	CKH2
20	STH
19	XSTH
18	CSH
17	PCG
16	XPCG
15	HVSS
14	G
13	R
12	B
11	PCD
10	XENB
9	ENB
8	CSV
7	XSTV
6	STV
5	VVDD
4	CKV2
3	CKV1
2	VVSS
1	COM

IC903 C0CBCAB00006

Q906 2SB1462JHL (POWER SUPPLY)

QR905 UNR9214J (P.SUPPLY CONTROL)

IC901 C0HBA0000094 (MONITOR LCD CONTROL/PROCESSOR)

IC902 MN7L012B5MF (BACK LIGHT CONTROL)

IC991 DN8797MS (LCD FORWARD/REVERS)

HALL SENSOR FLEX.CARD

Q903 2SB1462JHL (AMP)

Q904 2SD2216J0L (AMP)

Q902 B1DFCG000004 (BACKLIGHT CONTROL)

QR907 B1GDBEHH0001 (AMP)

QR906 UNR9214J (AMP)

QR902 UNR9214J (AMP)

QR901 UNR9214J (INV.)

T901 ETJ09K59AZ

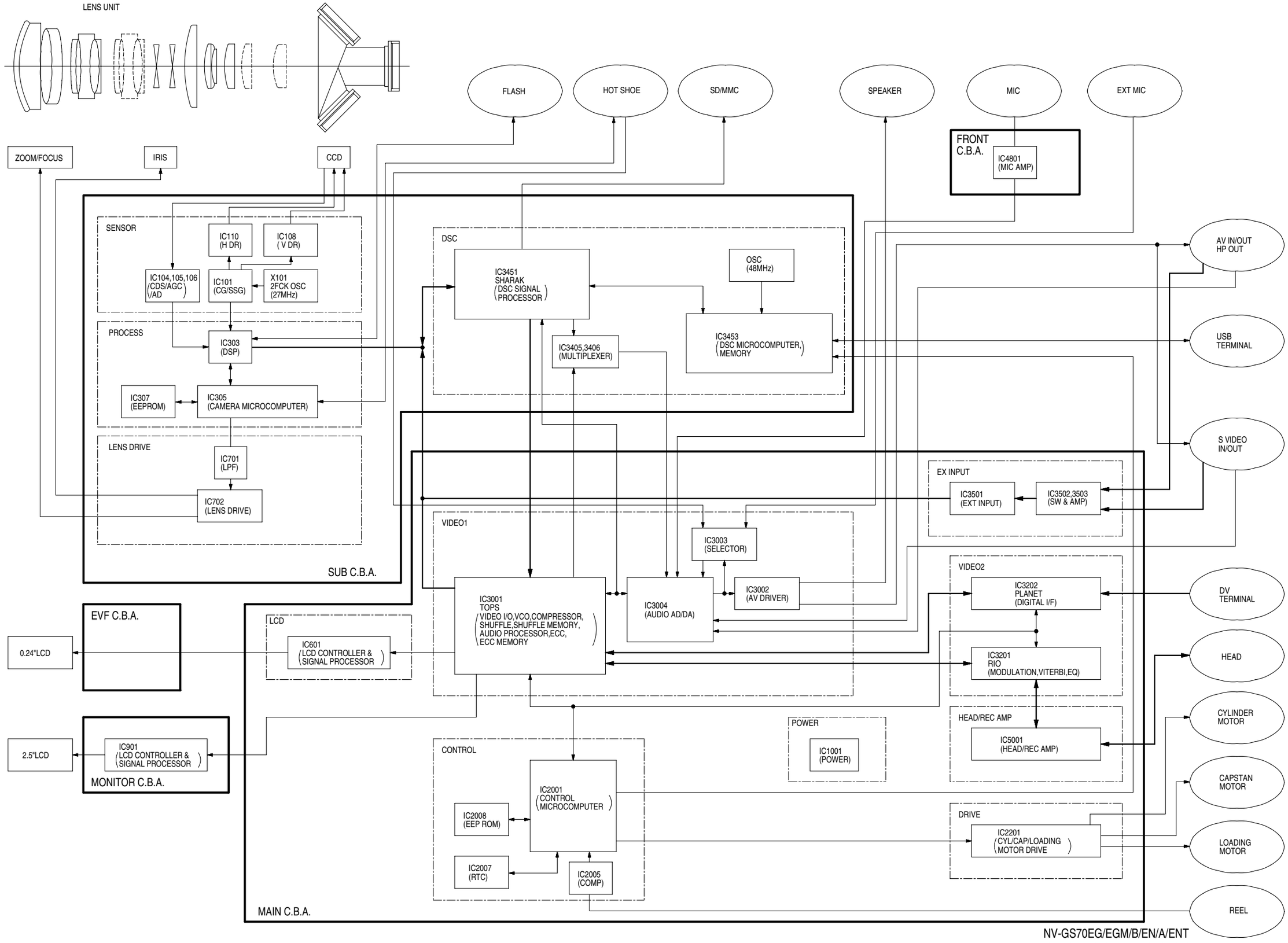
T902 EFTU21R203

TO BACKLIGHT

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

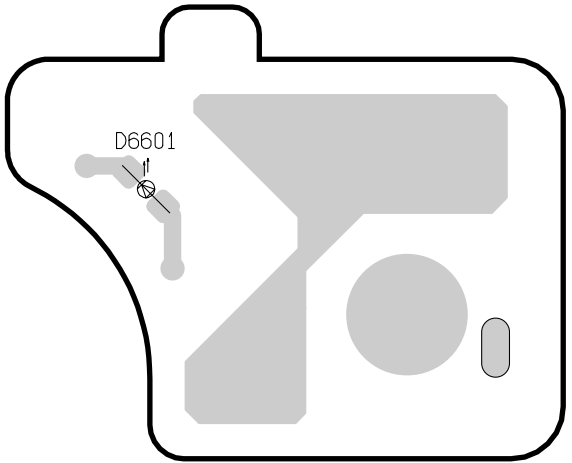
NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.(MONITOR:ON)

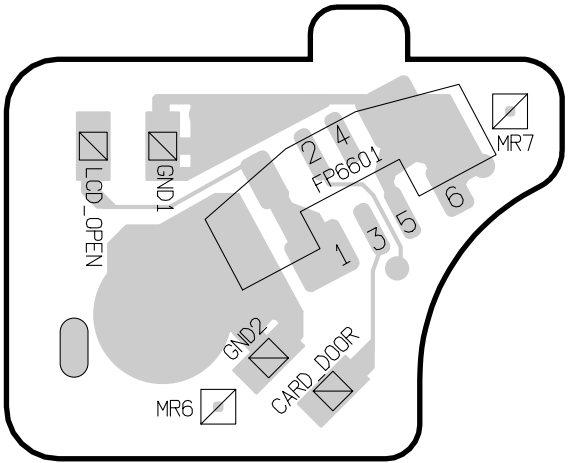
NV-GS70EG/EGM/B/EN/A/ENT
MONITOR & HALL SENSOR FLEX.
SCHEMATIC DIAGRAM



NV-GS70EG/EGM/B/EN/A/ENT
OVERALL SCHEMATIC DIAGRAM

(VEP001A9A)





(COMPONENT SIDE) (FOIL SIDE)

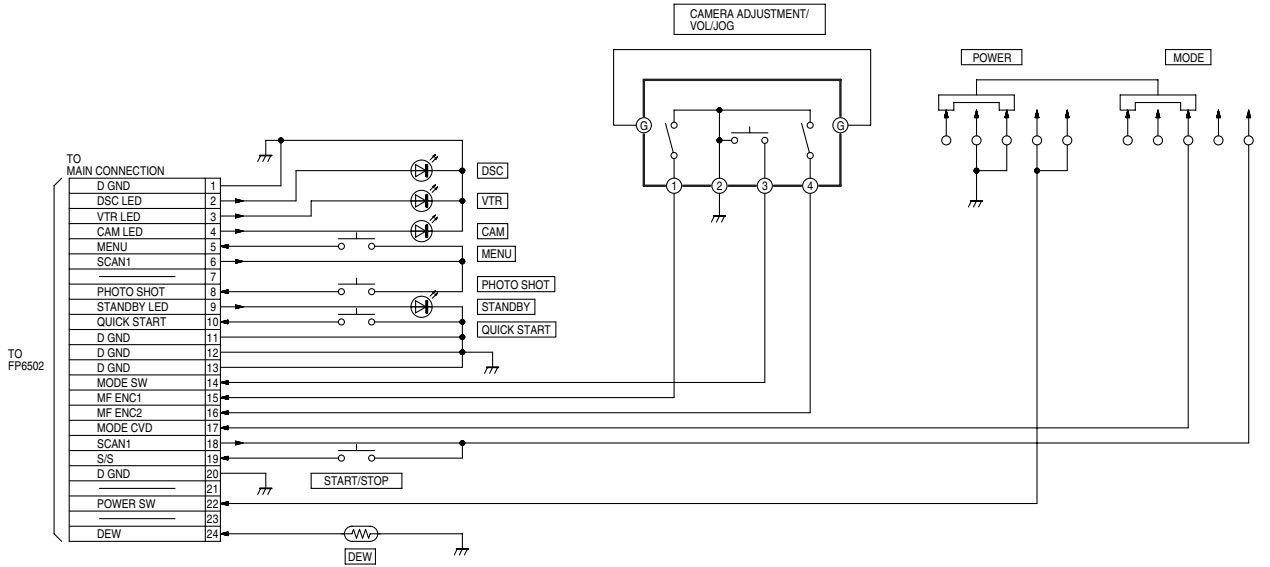
NV-GS70EG/EGM/B/EN/A/ENT
SIDE (R) (RELAY) C.B.A.

B

A

1 2 3 4 5

(REAR OPERATION UNIT)



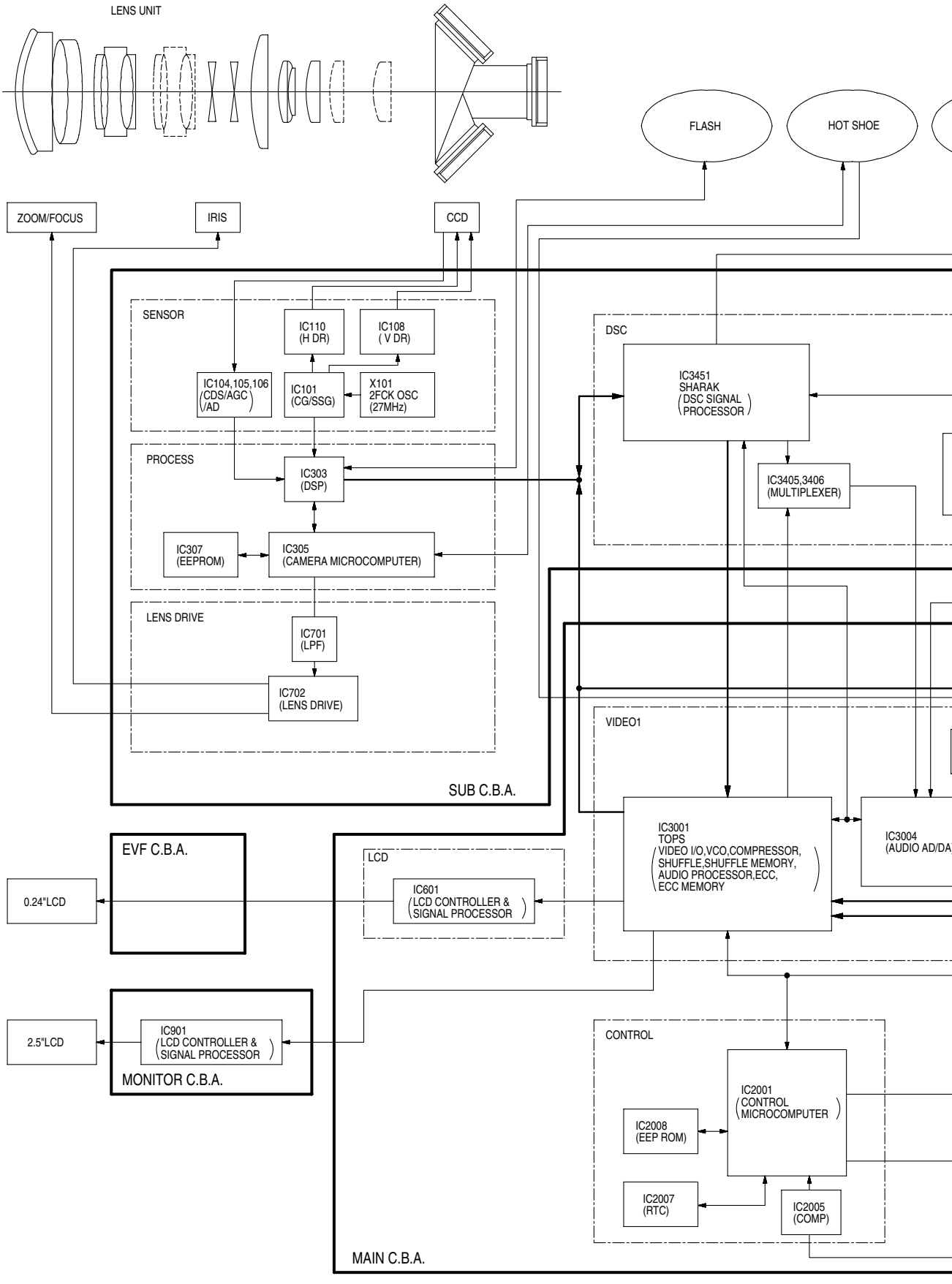
NV-GS70EG/EGM/B/EN/A/ENT
REAR OPERATION UNIT SCHEMATIC DIAGRAM

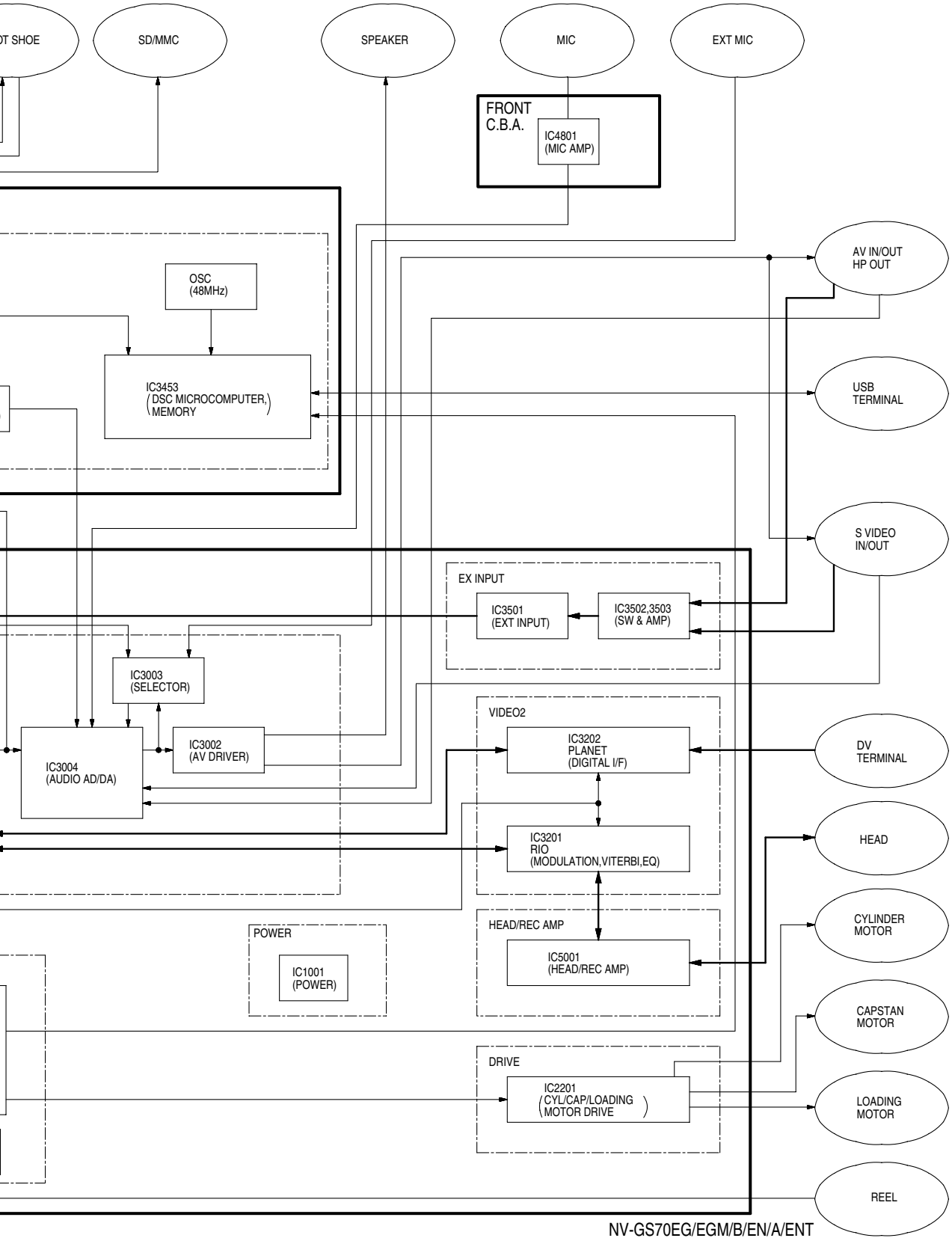
C B A

1 2 3 4 5

10 SCHEMATIC DIAGRAMS

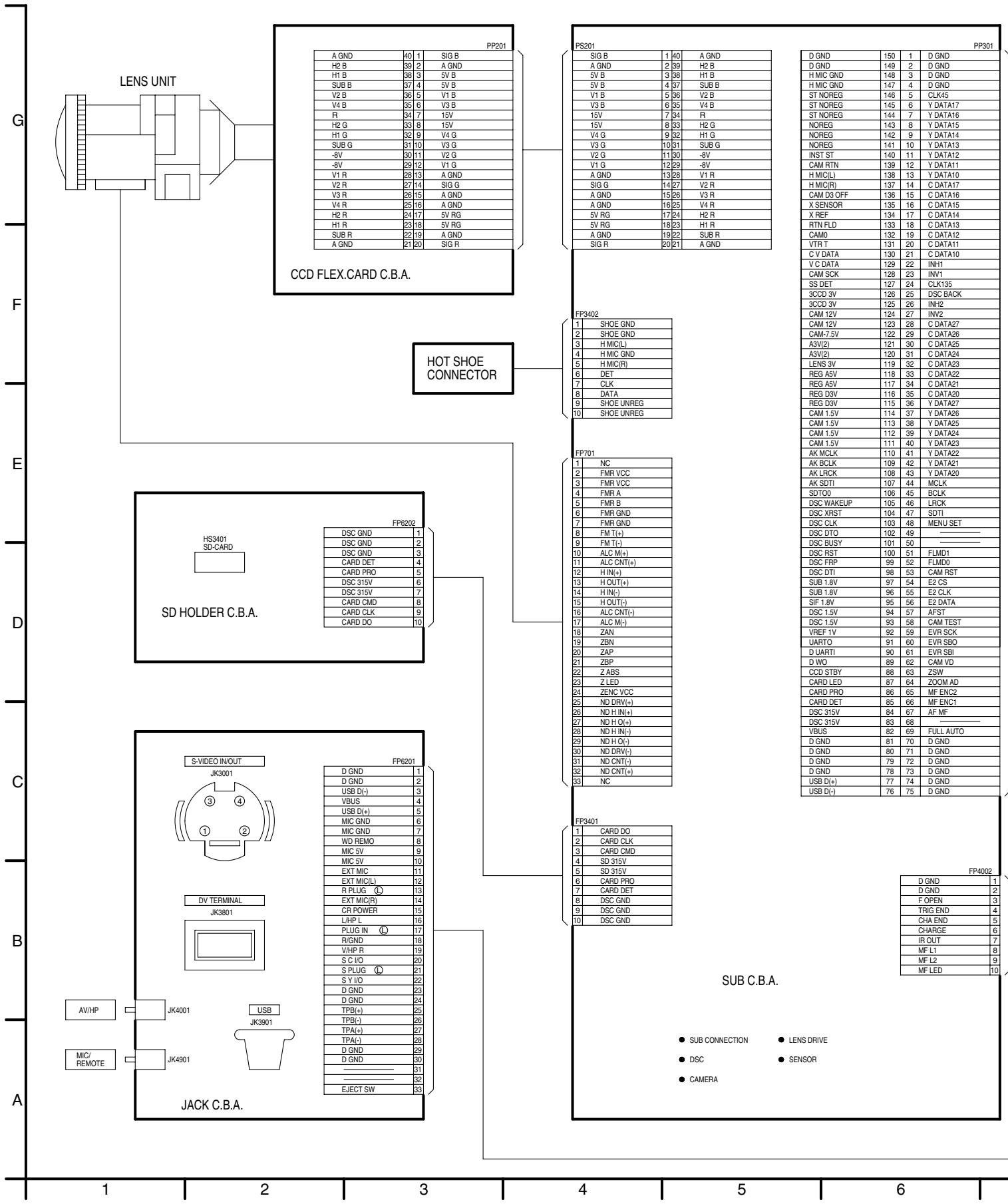
10.1. OVERALL SCHEMATIC DIAGRAM

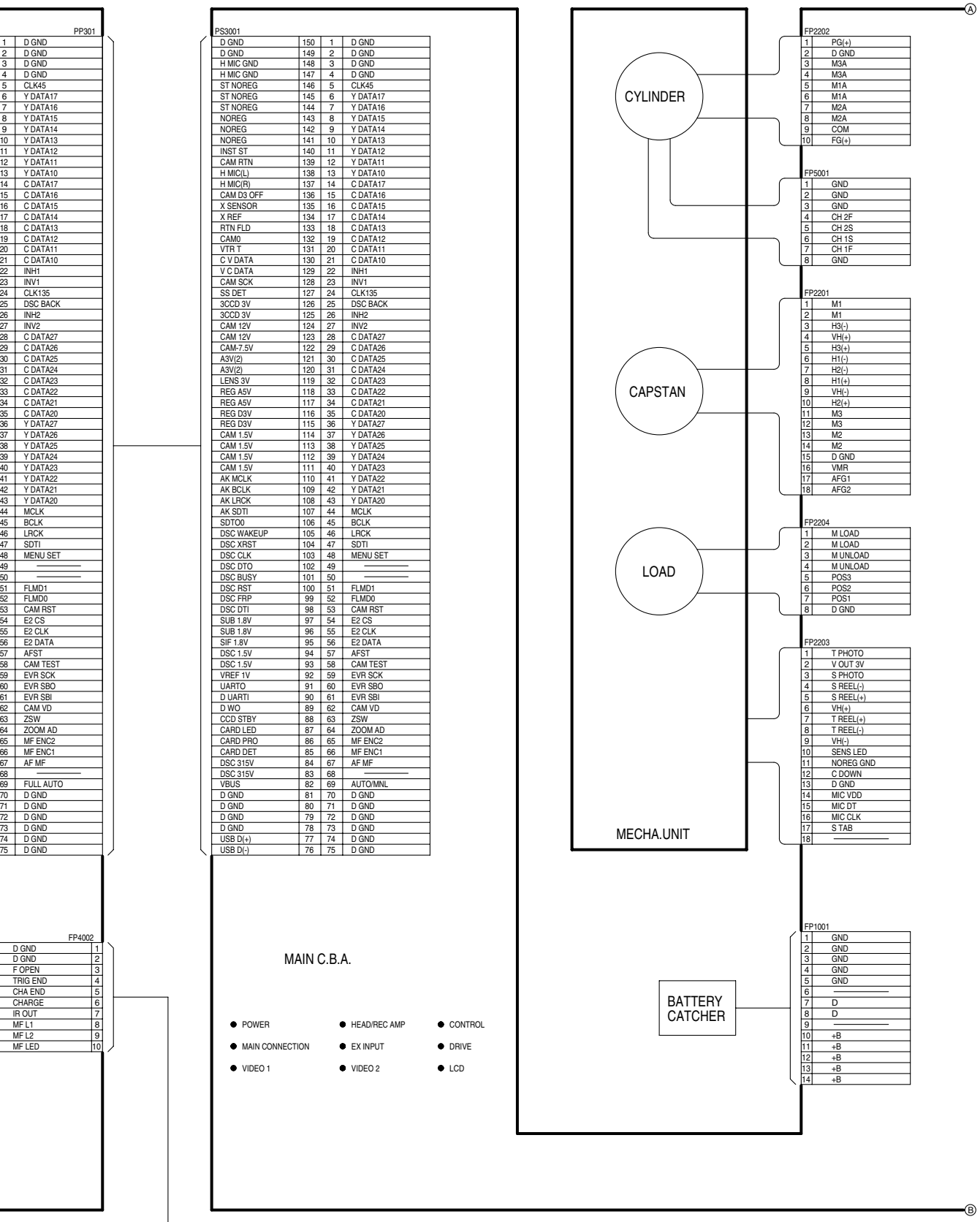


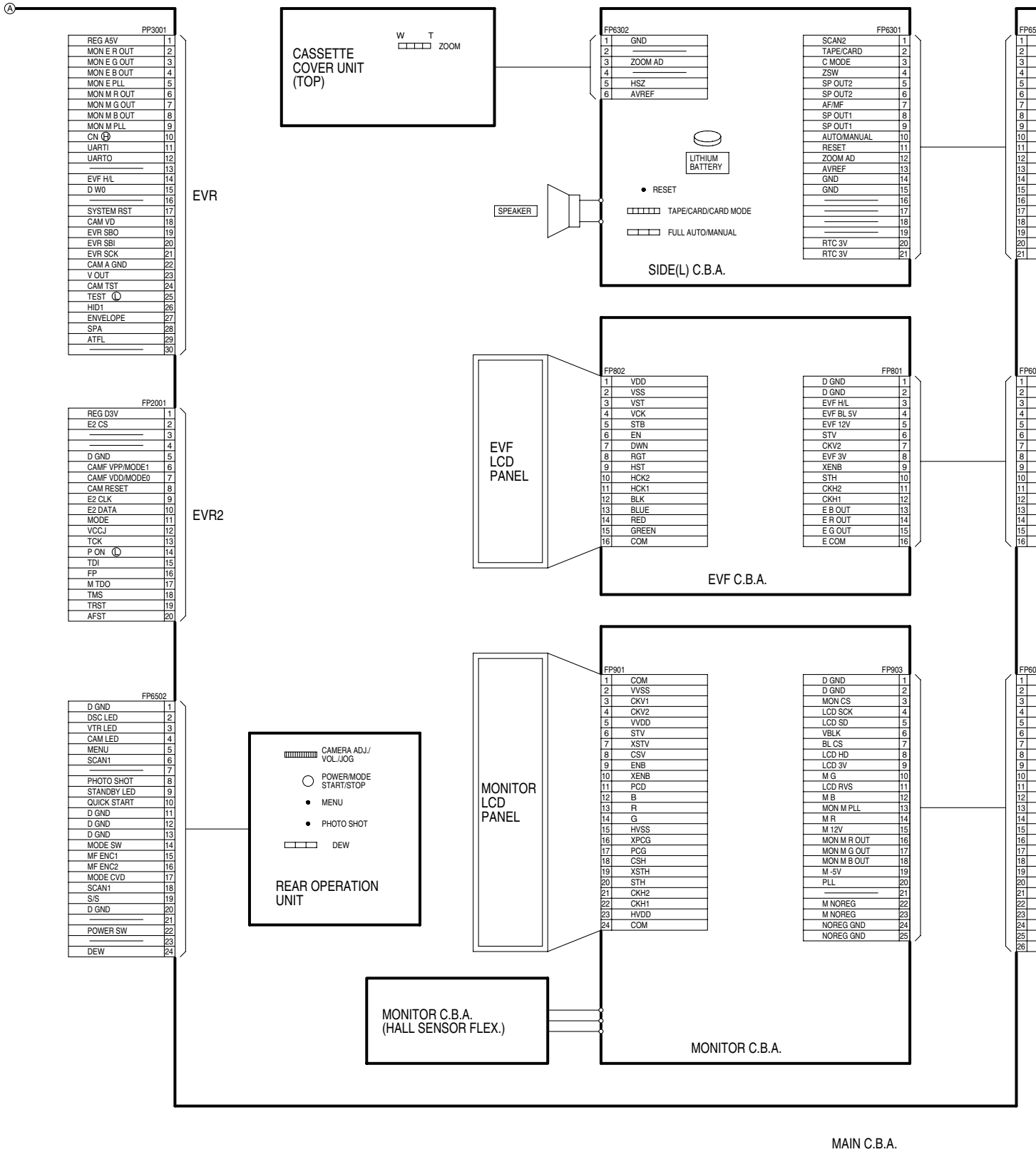


NV-GS70EG/EGM/B/EN/A/ENT
OVERALL SCHEMATIC DIAGRAM

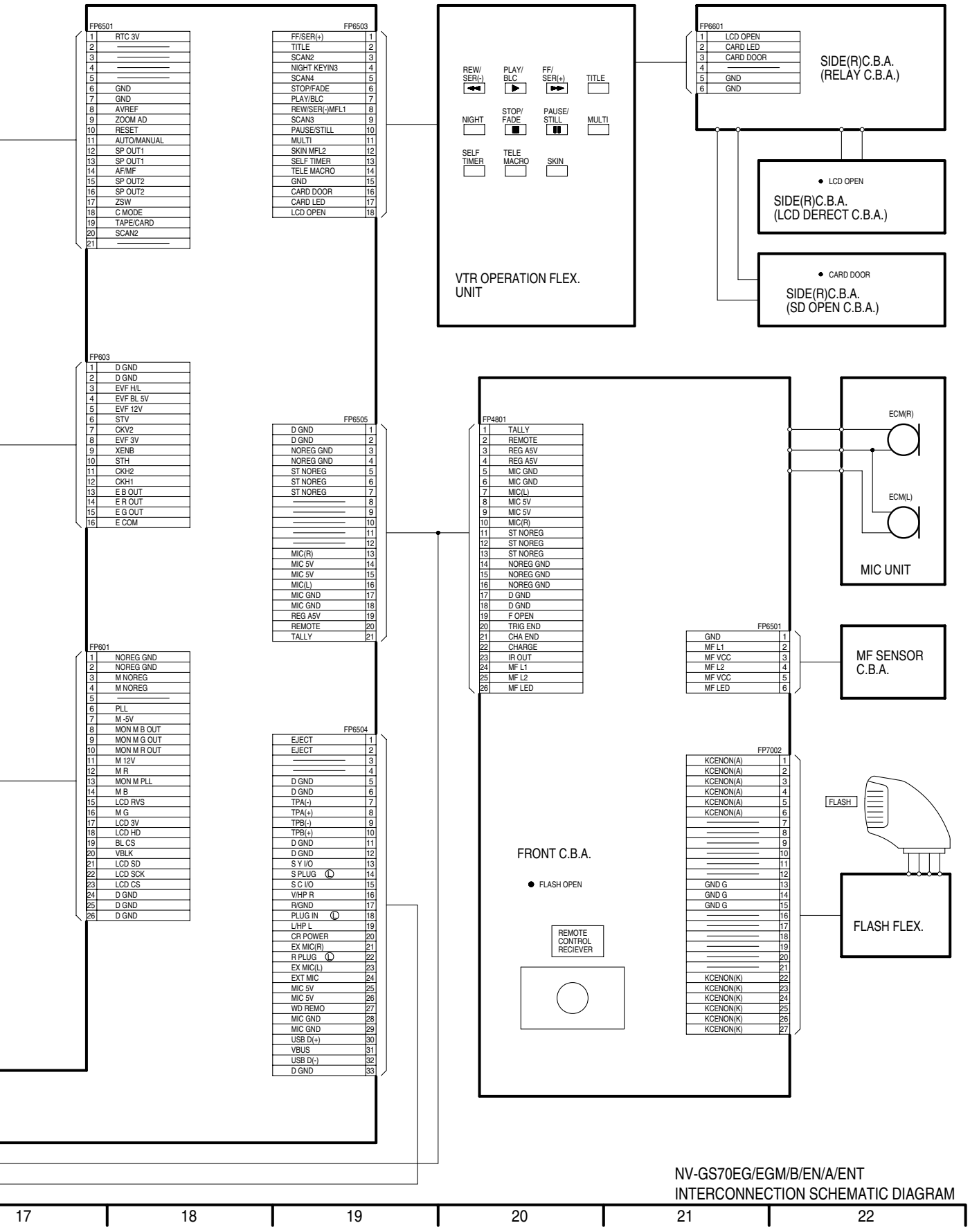
10.2. INTERCONNECTION SCHEMATIC DIAGRAM




PP301
1 D GND
2 D GND
3 D GND
4 D GND
5 CLK45
6 Y DATA17
7 Y DATA16
8 Y DATA15
9 Y DATA14
10 Y DATA13
11 Y DATA12
12 Y DATA11
13 Y DATA10
14 C DATA17
15 C DATA16
16 C DATA15
17 C DATA14
18 C DATA13
19 C DATA12
20 C DATA11
21 C DATA10
22 INH1
23 INV1
24 CLK135
25 DSC BACK
26 INH2
27 INV2
28 C DATA27
29 C DATA26
30 C DATA25
31 C DATA24
32 C DATA23
33 C DATA22
34 C DATA21
35 C DATA20
36 Y DATA27
37 Y DATA26
38 Y DATA25
39 Y DATA24
40 Y DATA23
41 Y DATA22
42 Y DATA21
43 Y DATA20
44 MCLK
45 BCLK
46 LRCK
47 SDTI
48 MENU SET
49 ————
50 ————
51 FLMD1
52 FLMD0
53 CAM RST
54 E2 CS
55 E2 CLK
56 E2 DATA
57 AFST
58 CAM TEST
59 EVR SCK
60 EVR SBO
61 EVR SBI
62 CAM VD
63 ZSW
64 ZOOM AD
65 MF ENC2
66 MF ENC1
67 AF MF
68 ————
69 FULL AUTO
70 D GND
71 D GND
72 D GND
73 D GND
74 D GND
75 D GND
PS3001
D GND 150 1 D GND
D GND 149 2 D GND
H MIC GND 148 3 D GND
H MIC GND 147 4 D GND
ST NOREG 146 5 CLK45
ST NOREG 145 6 Y DATA17
ST NOREG 144 7 Y DATA16
NOREG 143 8 Y DATA15
NOREG 142 9 Y DATA14
NOREG 141 10 Y DATA13
INST ST 140 11 Y DATA12
CAM RTN 139 12 Y DATA11
H MIC(L) 138 13 Y DATA10
H MIC(R) 137 14 C DATA17
CAM D3 OFF 136 15 C DATA16
X SENSOR 135 16 C DATA15
X REF 134 17 C DATA14
RTN FLD 133 18 C DATA13
CAM0 132 19 C DATA12
VTR T 131 20 C DATA11
C V DATA 130 21 C DATA10
V C DATA 129 22 INH1
CAM SCK 128 23 INV1
SS DET 127 24 CLK135
3CCD 3V 126 25 DSC BACK
3CCD 3V 125 26 INH2
CAM 12V 124 27 INV2
CAM 12V 123 28 C DATA27
CAM-7.5V 122 29 C DATA26
A3V(2) 121 30 C DATA25
A3V(2) 120 31 C DATA24
LENS 3V 119 32 C DATA23
REG A5V 118 33 C DATA22
REG A5V 117 34 C DATA21
REG D3V 116 35 C DATA20
REG D3V 115 36 Y DATA27
CAM 1.5V 114 37 Y DATA26
CAM 1.5V 113 38 Y DATA25
CAM 1.5V 112 39 Y DATA24
CAM 1.5V 111 40 Y DATA23
AK MCLK 110 41 Y DATA22
AK BCLK 109 42 Y DATA21
AK LRCK 108 43 Y DATA20
AK SDTI 107 44 MCLK
SDTO0 106 45 BCLK
DSC WAKEUP 105 46 LRCK
DSC XRST 104 47 SDTI
DSC CLK 103 48 MENU SET
DSC DTO 102 49 ————
DSC BUSY 101 50 ————
DSC RST 100 51 FLMD1
DSC FRP 99 52 FLMD0
DSC DTI 98 53 CAM RST
SUB 1.8V 97 54 E2 CS
SUB 1.8V 96 55 E2 CLK
SIF 1.8V 95 56 E2 DATA
DSC 1.5V 94 57 AFST
DSC 1.5V 93 58 CAM TEST
VREF 1V 92 59 EVR SCK
UARTO 91 60 EVR SBO
D UARTI 90 61 EVR SBI
D WO 89 62 CAM VD
CCD STBY 88 63 ZSW
CARD LED 87 64 ZOOM AD
CARD PRO 86 65 MF ENC2
CARD DET 85 66 MF ENC1
DSC 315V 84 67 AF MF
DSC 315V 83 68 ————
VBUS 82 69 AUTO/MNL
D GND 81 70 D GND
D GND 80 71 D GND
D GND 79 72 D GND
D GND 78 73 D GND
USB D(+) 77 74 D GND
USB D(-) 76 75 D GND
FP4002
D GND 1
D GND 2
F OPEN 3
TRIG END 4
CHA END 5
CHARGE 6
IR OUT 7
MF L1 8
MF L2 9
MF LED 10
MAIN C.B.A.
POWER
MAIN CONNECTION
VIDEO 1
HEAD/REC AMP
EX INPUT
VIDEO 2
CONTROL
DRIVE
LCD
CYLINDER
CAPSTAN
LOAD
MECHA.UNIT
BATTERY CATCHER
FP2202
1 PG(+)
2 D GND
3 M3A
4 M3A
5 M1A
6 M1A
7 M2A
8 M2A
9 COM
10 FG(+)
FP5001
1 GND
2 GND
3 GND
4 CH 2F
5 CH 2S
6 CH 1S
7 CH 1F
8 GND
FP2201
1 M1
2 M1
3 H3(-)
4 VH(+)
5 H3(+)
6 H1(-)
7 H2(-)
8 H1(+)
9 VH(-)
10 H2(+)
11 M3
12 M3
13 M2
14 M2
15 D GND
16 VMR
17 AFG1
18 AFG2
FP2204
1 M LOAD
2 M LOAD
3 M UNLOAD
4 M UNLOAD
5 POS3
6 POS2
7 POS1
8 D GND
FP2203
1 T PHOTO
2 V OUT 3V
3 S PHOTO
4 S REEL(-)
5 S REEL(+)
6 VH(+)
7 T REEL(+)
8 T REEL(-)
9 VH(-)
10 SENS LED
11 NOREG GND
12 C DOWN
13 D GND
14 MIC VDD
15 MIC DT
16 MIC CLK
17 S TAB
18 ————
FP1001
1 GND
2 GND
3 GND
4 GND
5 GND
6 ————
7 D
8 D
9 ————
10 +B
11 +B
12 +B
13 +B
14 +B
A
B
C
D
E



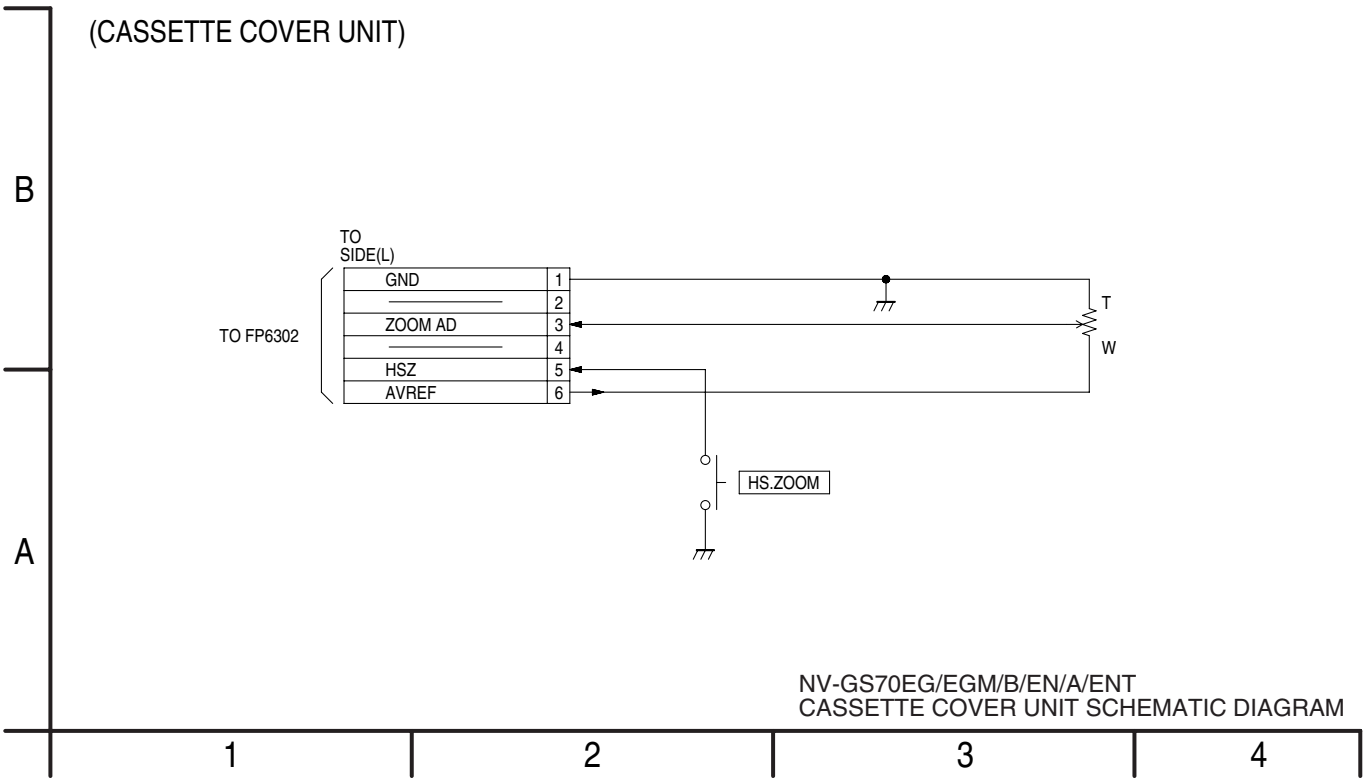
NV-GS70EG/EGM/B/EN/A/ENT INTERCONNECTION SCHEMATIC DIAGRAM



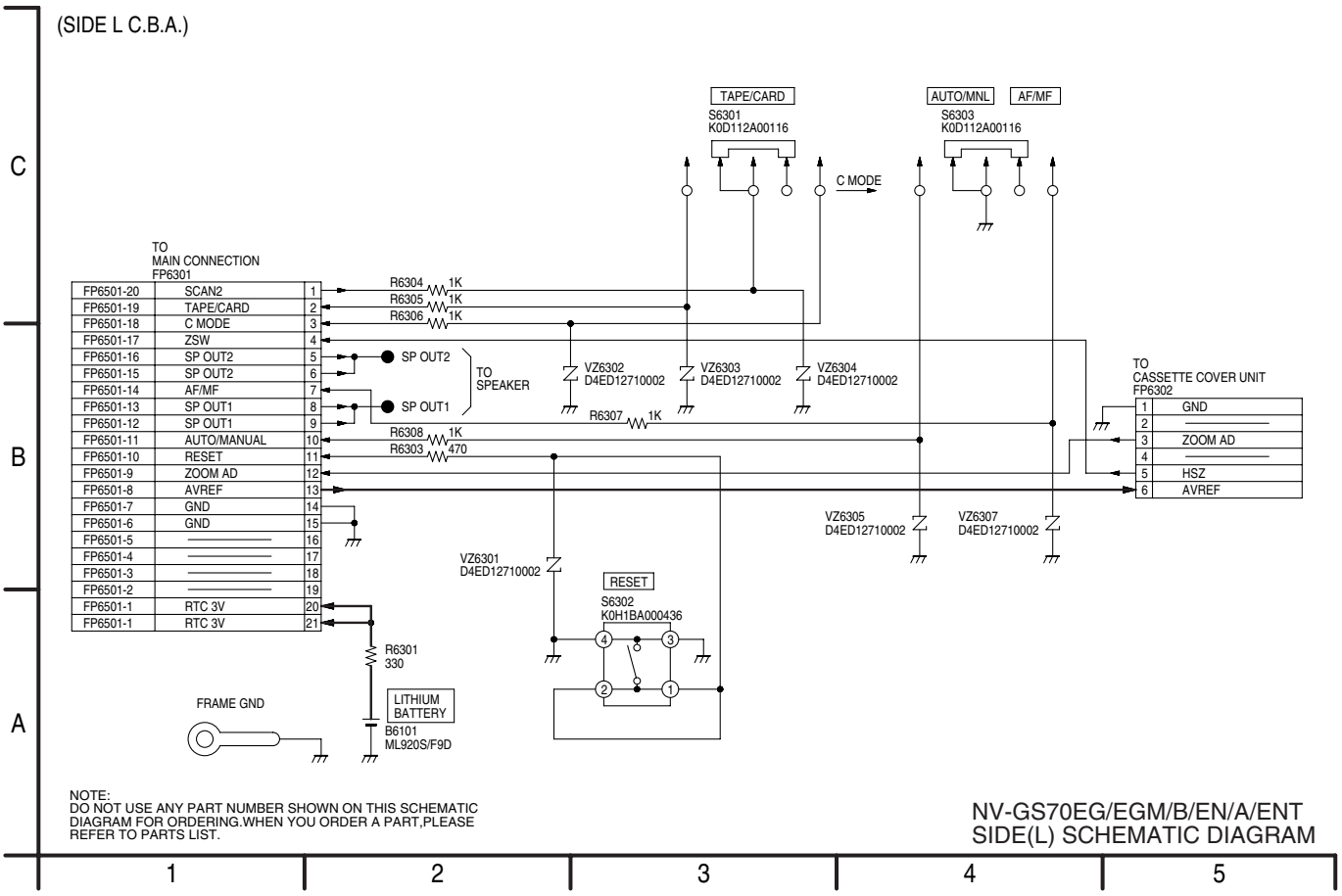
NV-GS70EG/EGM/B/EN/A/ENT
INTERCONNECTION SCHEMATIC DIAGRAM

17 | 18 | 19 | 20 | 21 | 22

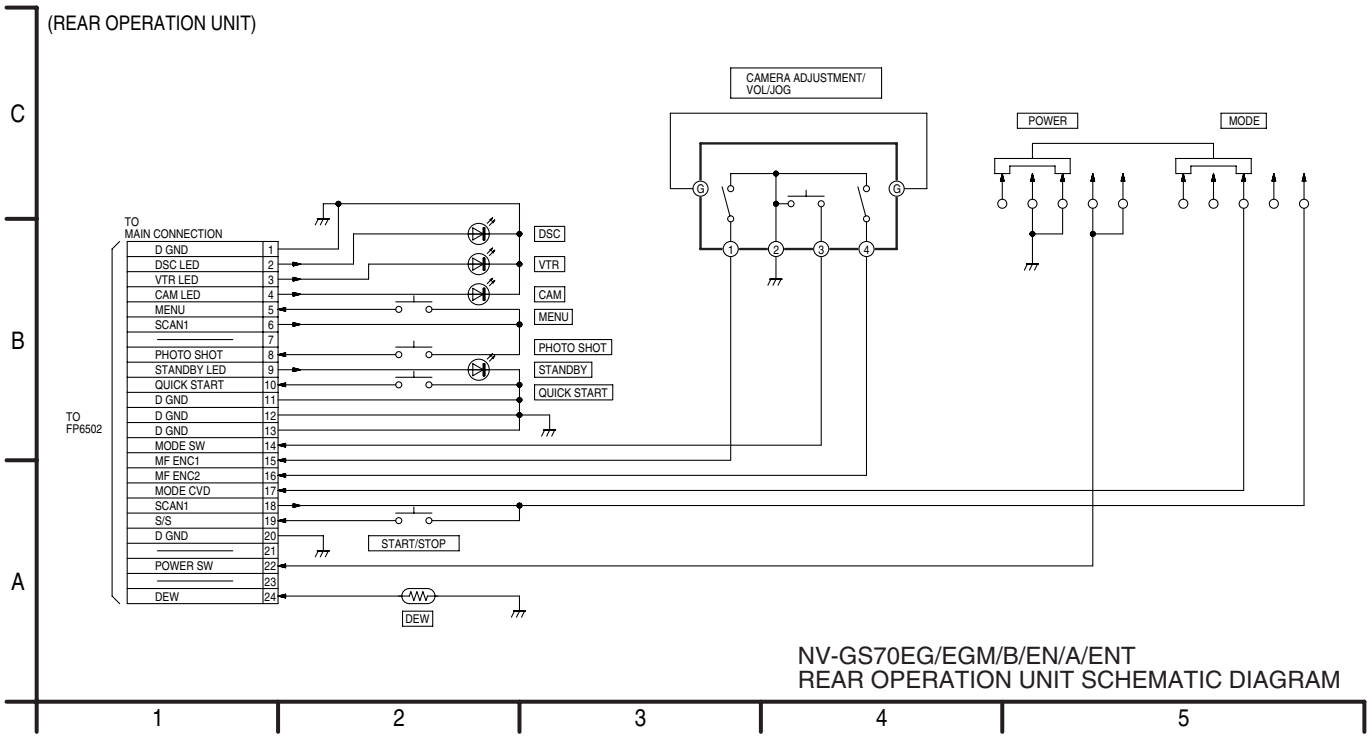
10.3. CASSETTE COVER UNIT SCHEMATIC DIAGRAM



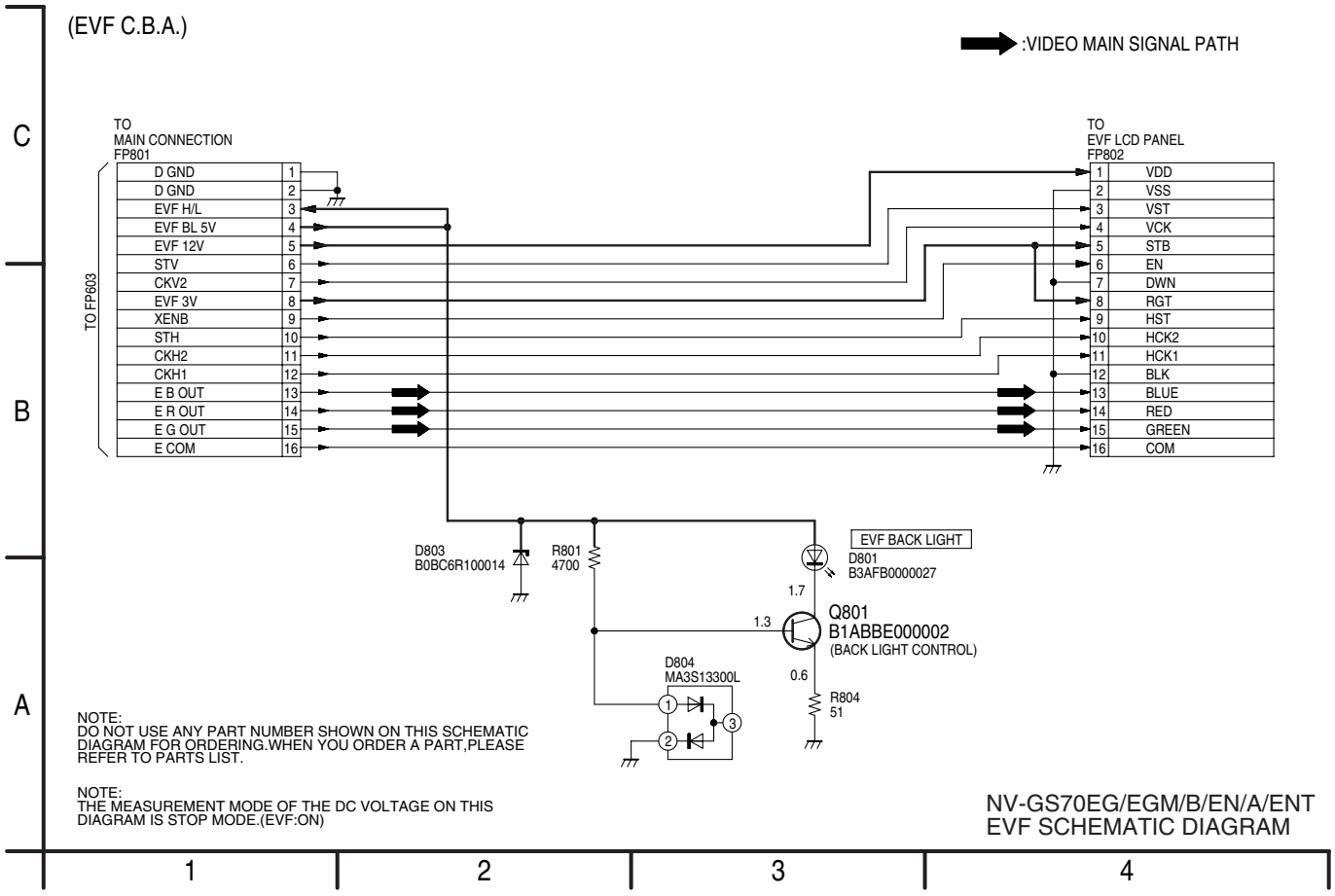
10.4. SIDE (L) SCHEMATIC DIAGRAM



10.5. REAR OPERATION SCHEMATIC DIAGRAM

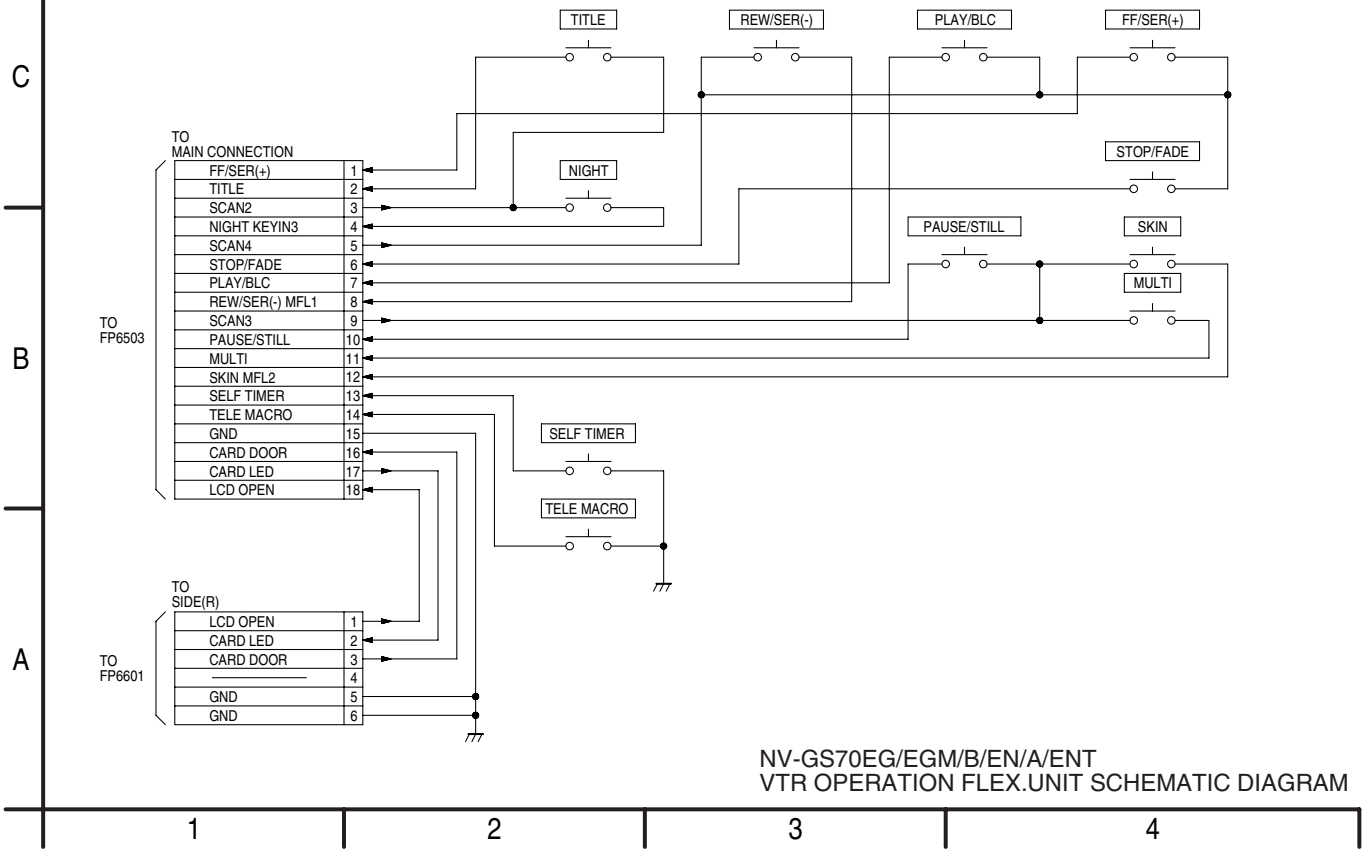


10.6. EVF SCHEMATIC DIAGRAM



10.7. VTR OPERATION SCHEMATIC DIAGRAM

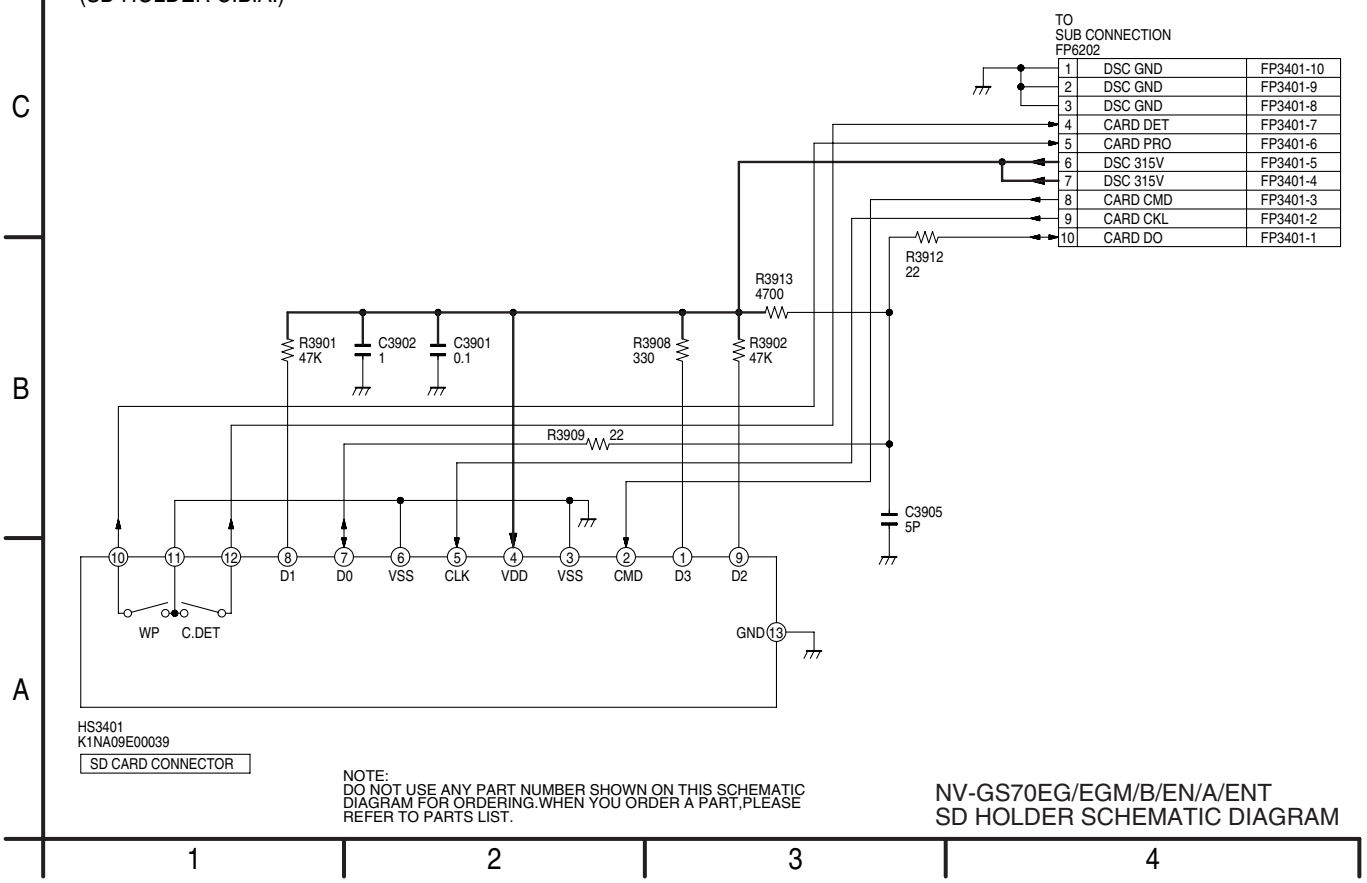
(VTR OPEATION FLEX.UNIT)



NV-GS70EG/EGM/B/EN/A/ENT
VTR OPERATION FLEX.UNIT SCHEMATIC DIAGRAM

10.8. SD HOLDER SCHEMATIC DIAGRAM

(SD HOLDER C.B.A.)

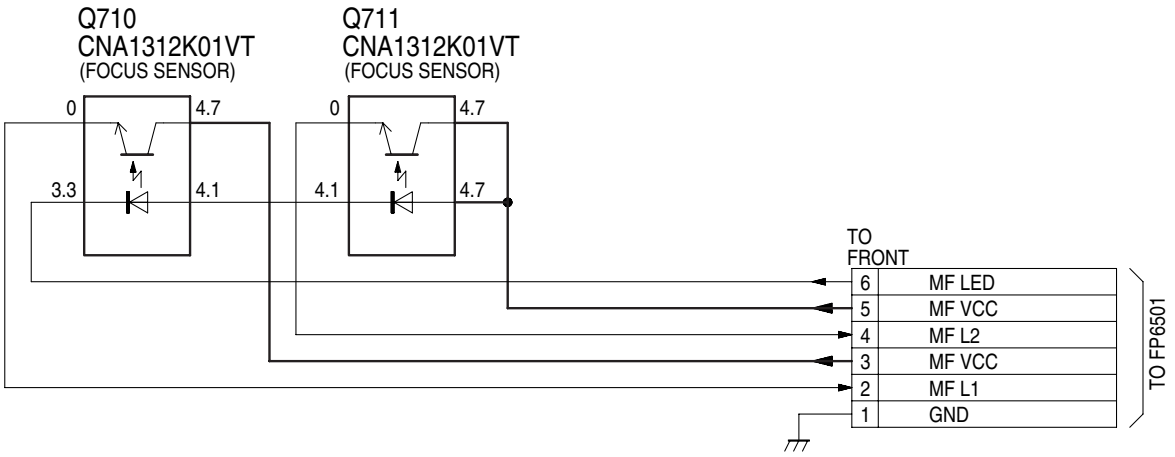


NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-GS70EG/EGM/B/EN/A/ENT
SD HOLDER SCHEMATIC DIAGRAM

10.9. MF SENSOR SCHEMATIC DIAGRAM

(MF SENSOR C.B.A.)



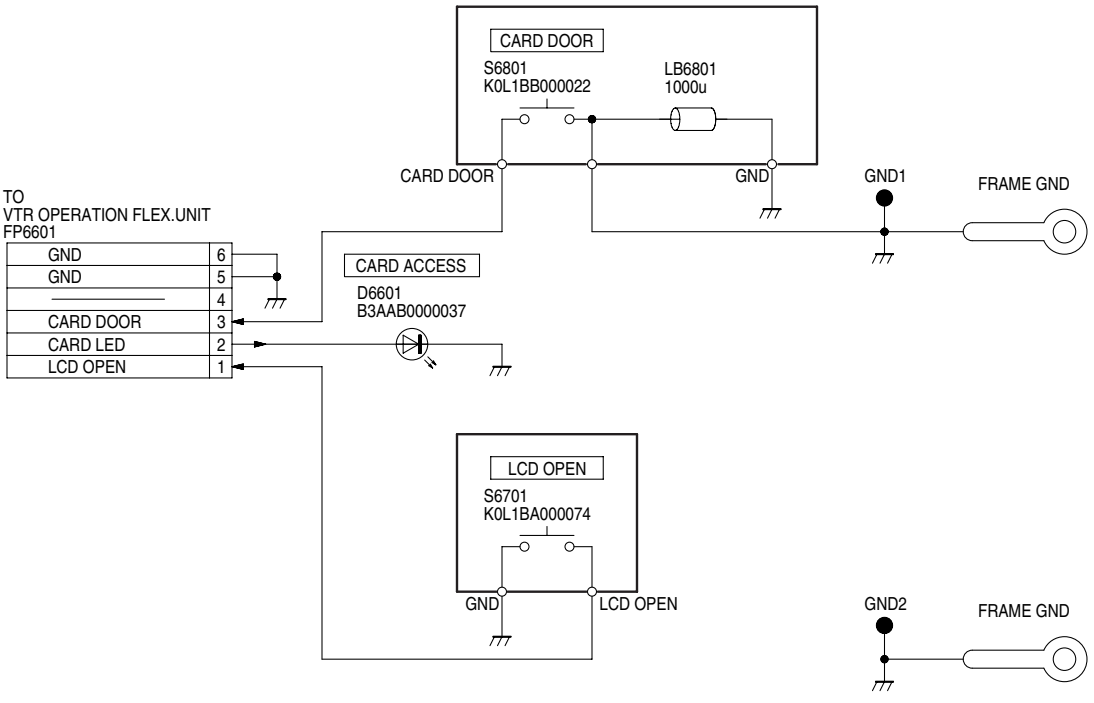
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NV-GS70EG/EGM/B/EN/A/ENT
MF SENSOR SCHEMATIC DIAGRAM

10.10. SIDE (R) SCHEMATIC DIAGRAM

(SIDE R C.B.A.)

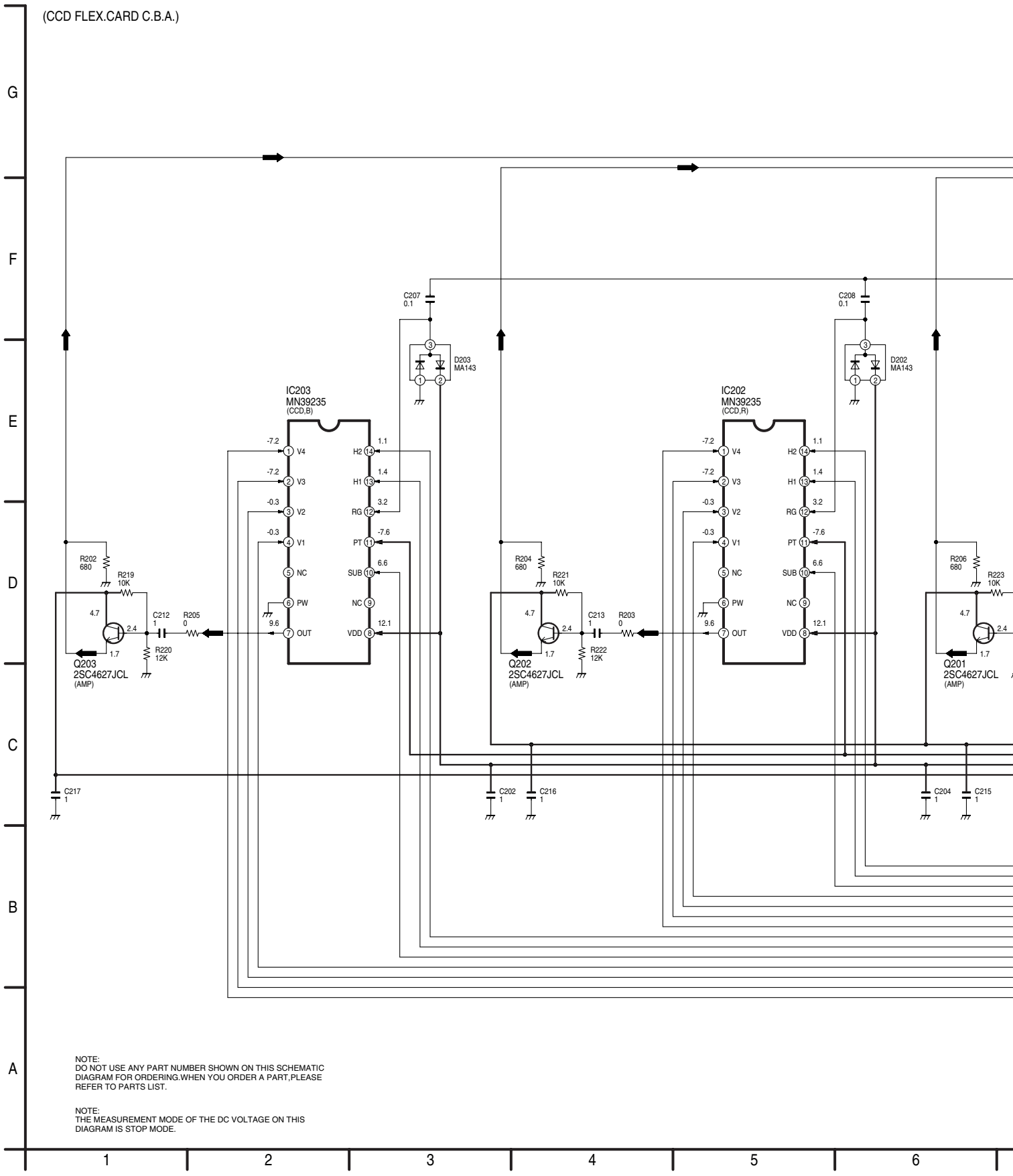


NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-GS70EG/EGM/B/EN/A/ENT
SIDE(R) SCHEMATIC DIAGRAM

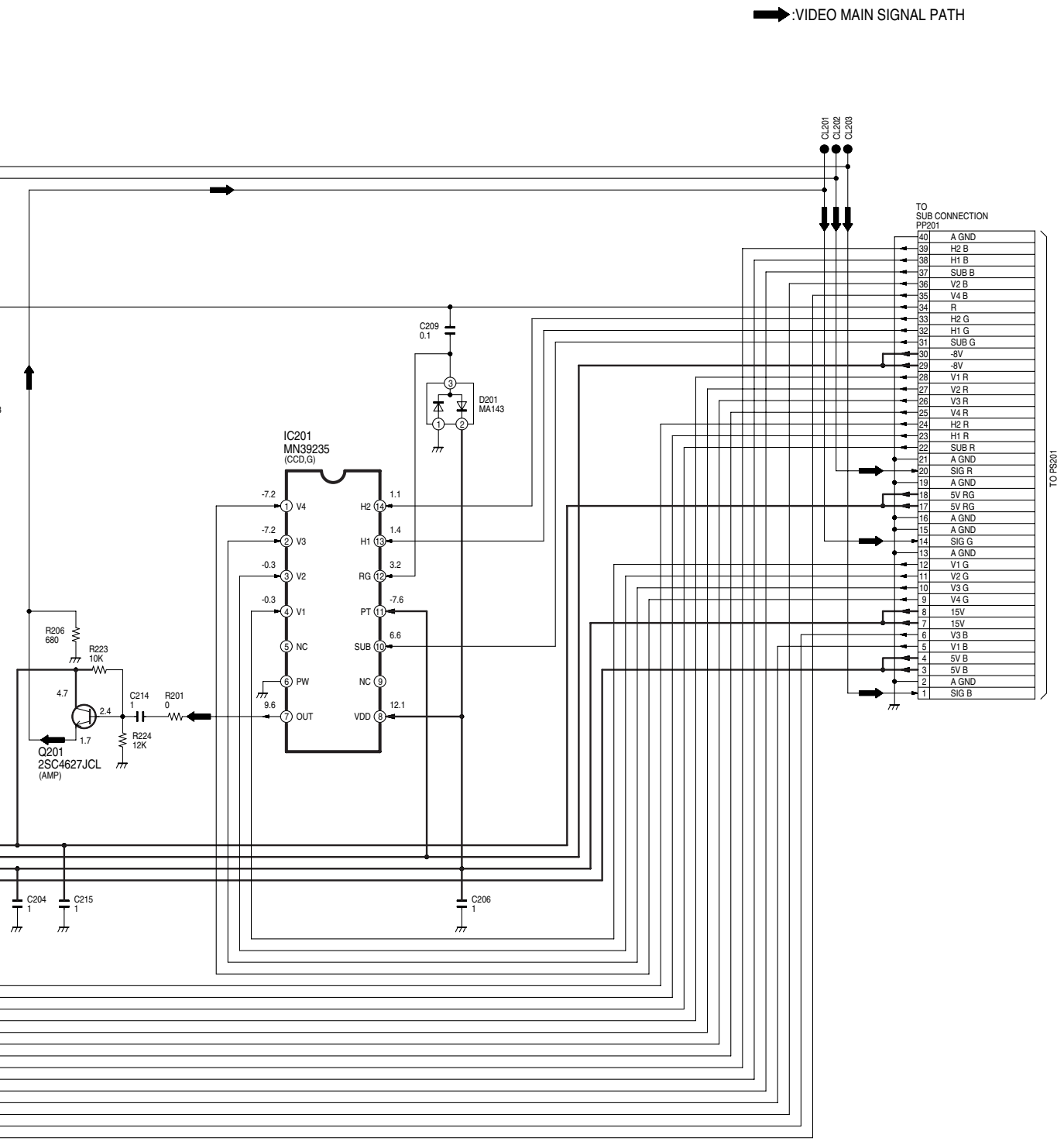
10.11. CCD FLEX. SCHEMATIC DIAGRAM

(CCD FLEX.CARD C.B.A.)



NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

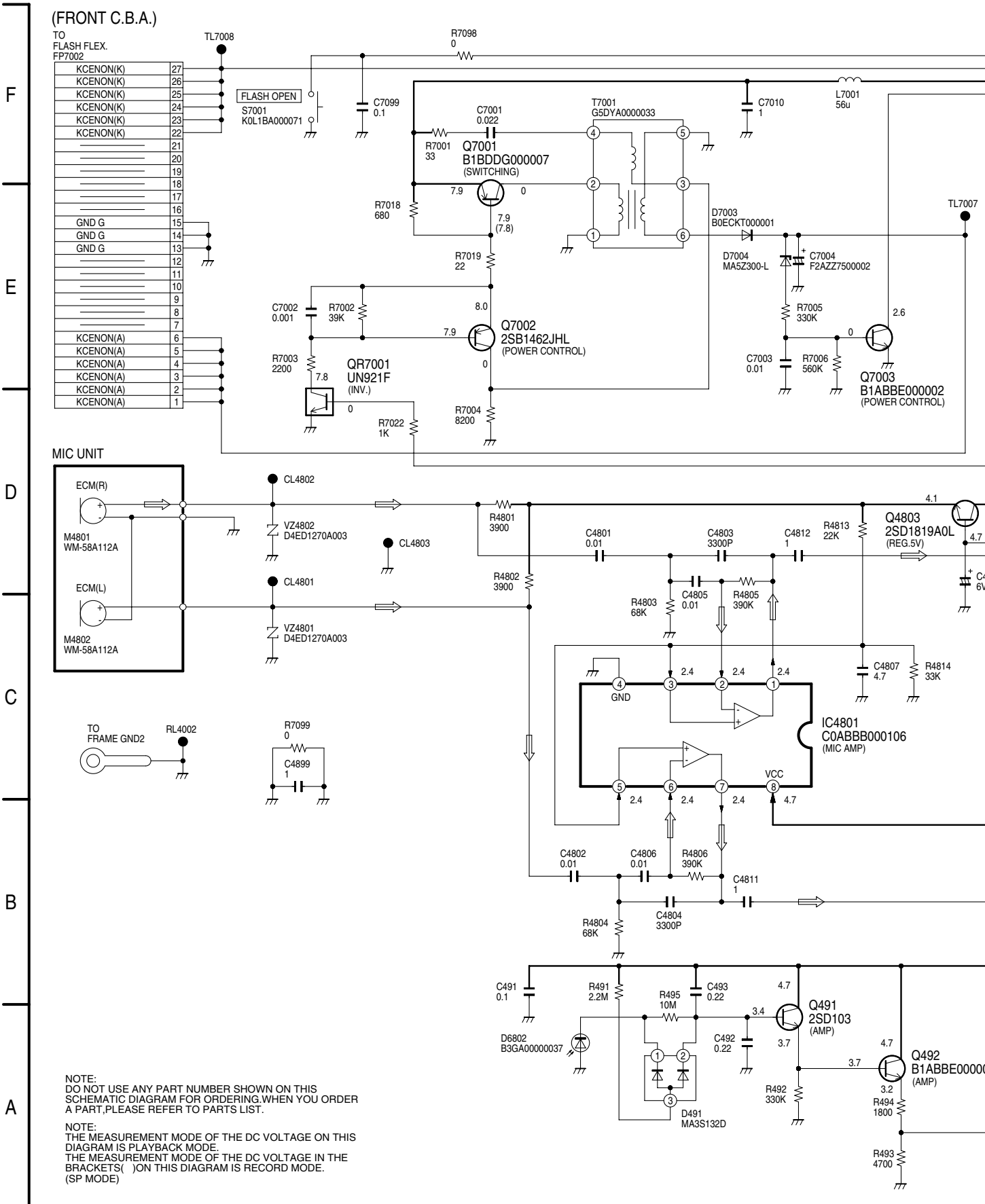
NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.



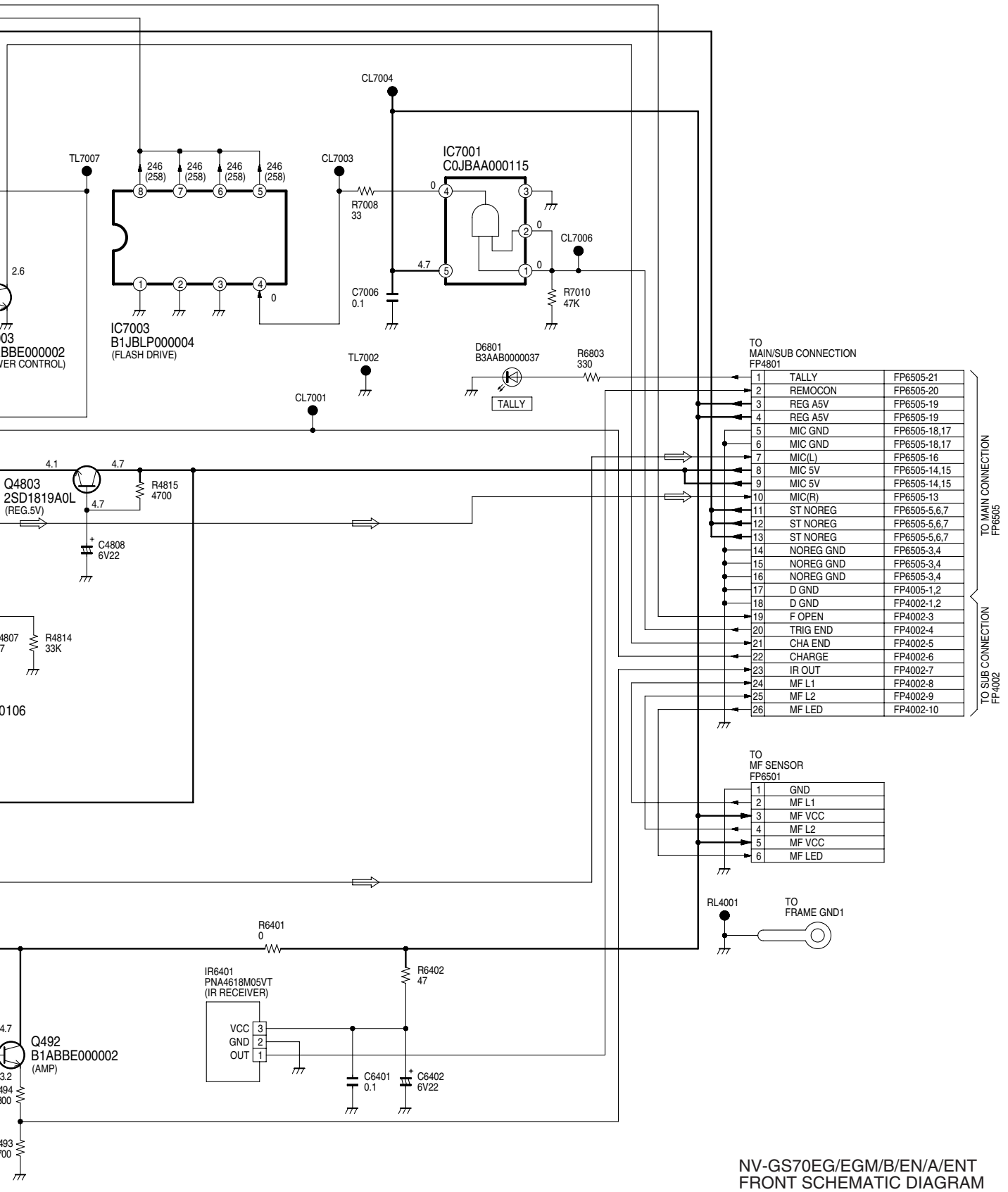
NV-GS70EG/EGM/B/EN/A/ENT
CCD FLEX. SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10 | 11

10.12. FRONT SCHEMATIC DIAGRAM



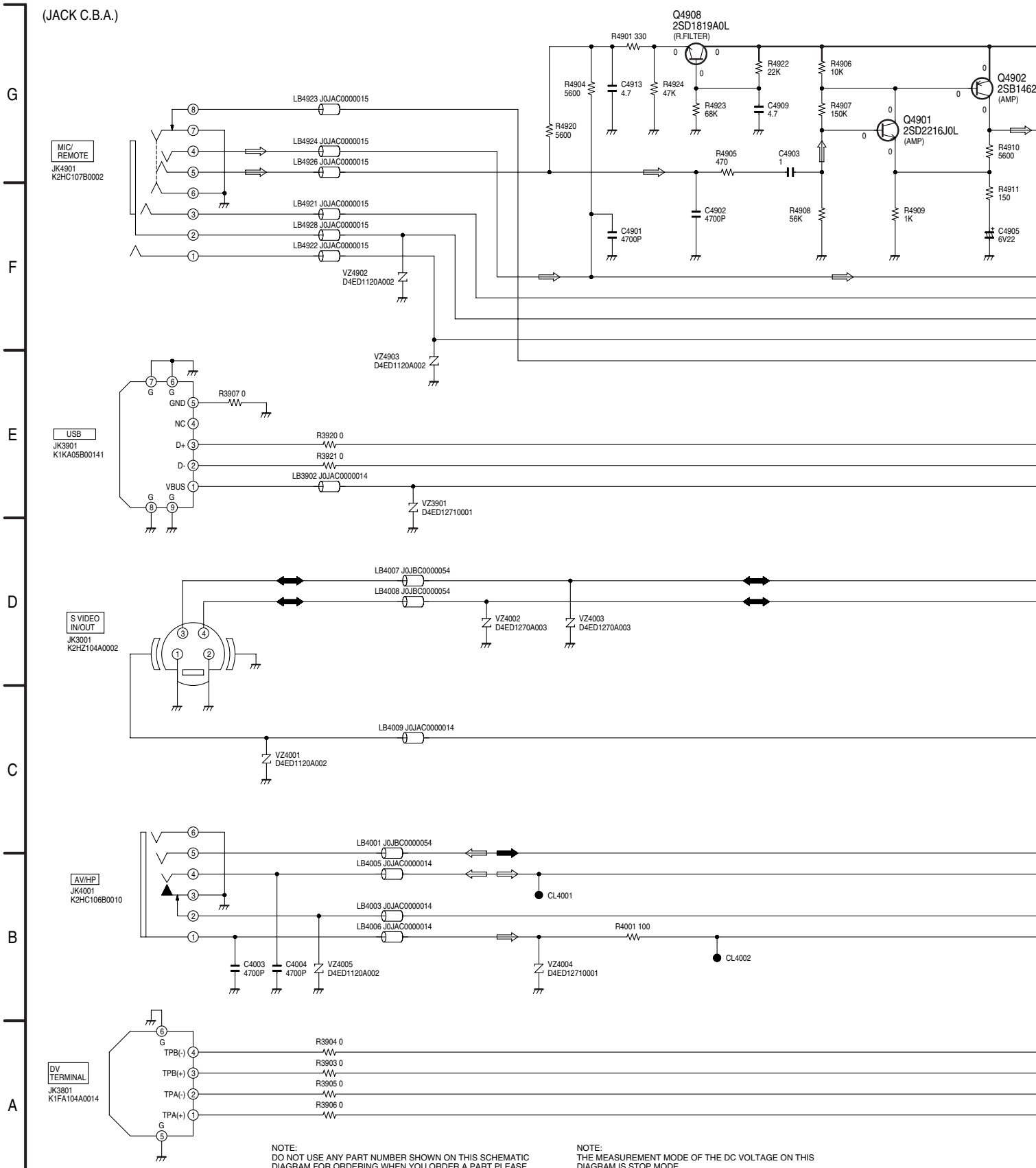
:AUDIO MAIN SIGNAL PATH

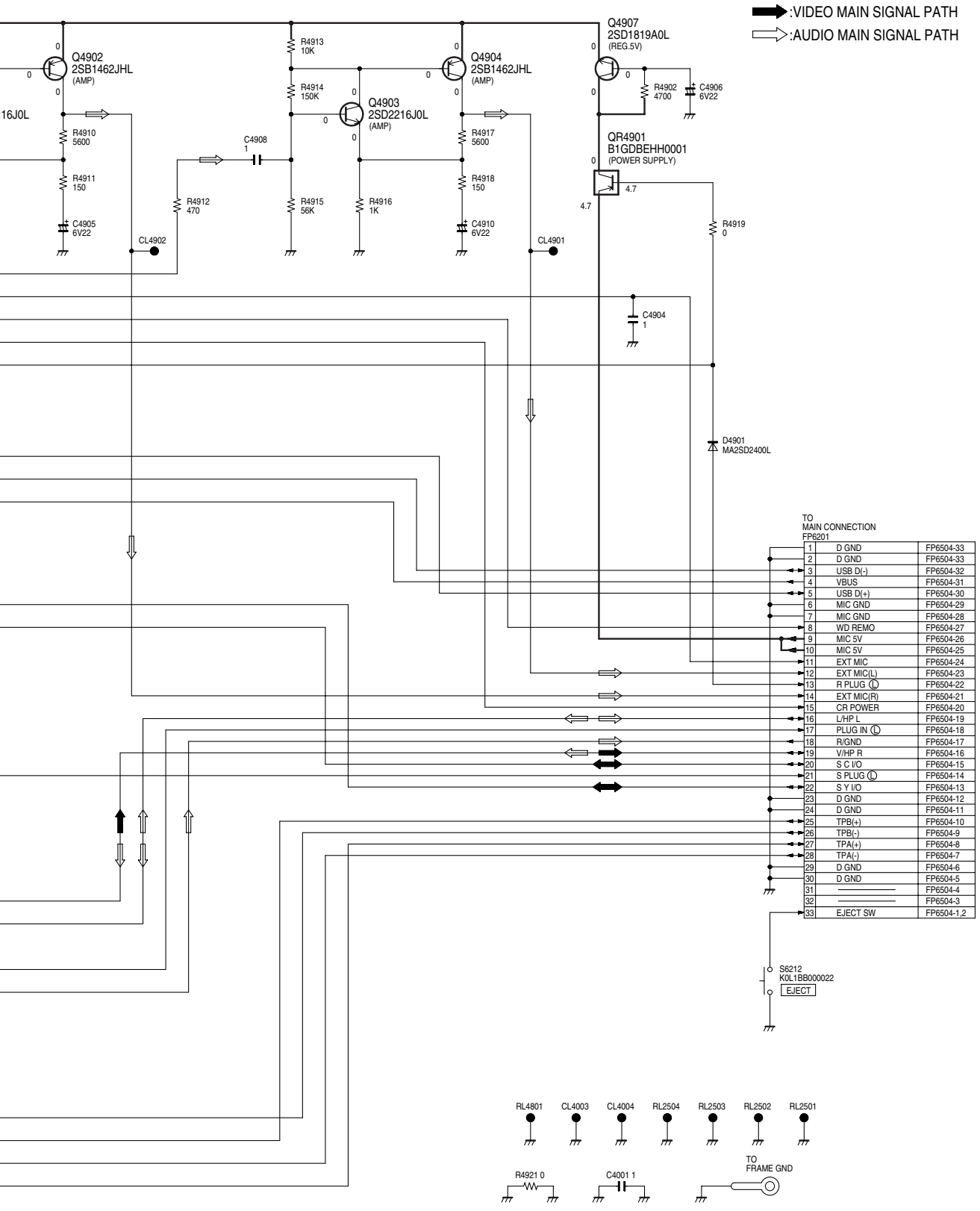


NV-GS70EG/EGM/B/EN/A/ENT
FRONT SCHEMATIC DIAGRAM

5 | 6 | 7 | 8 | 9

10.13. JACK SCHEMATIC DIAGRAM

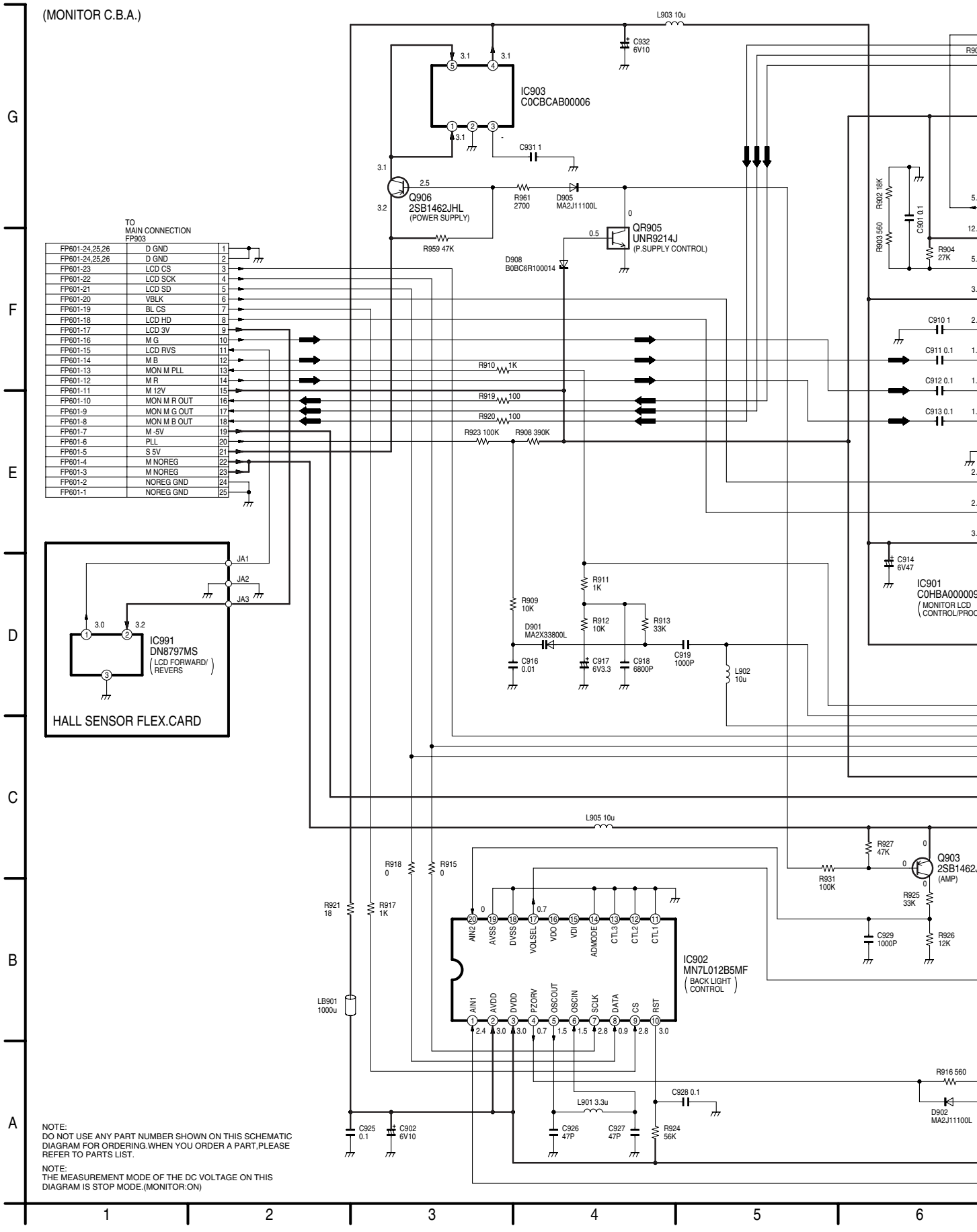


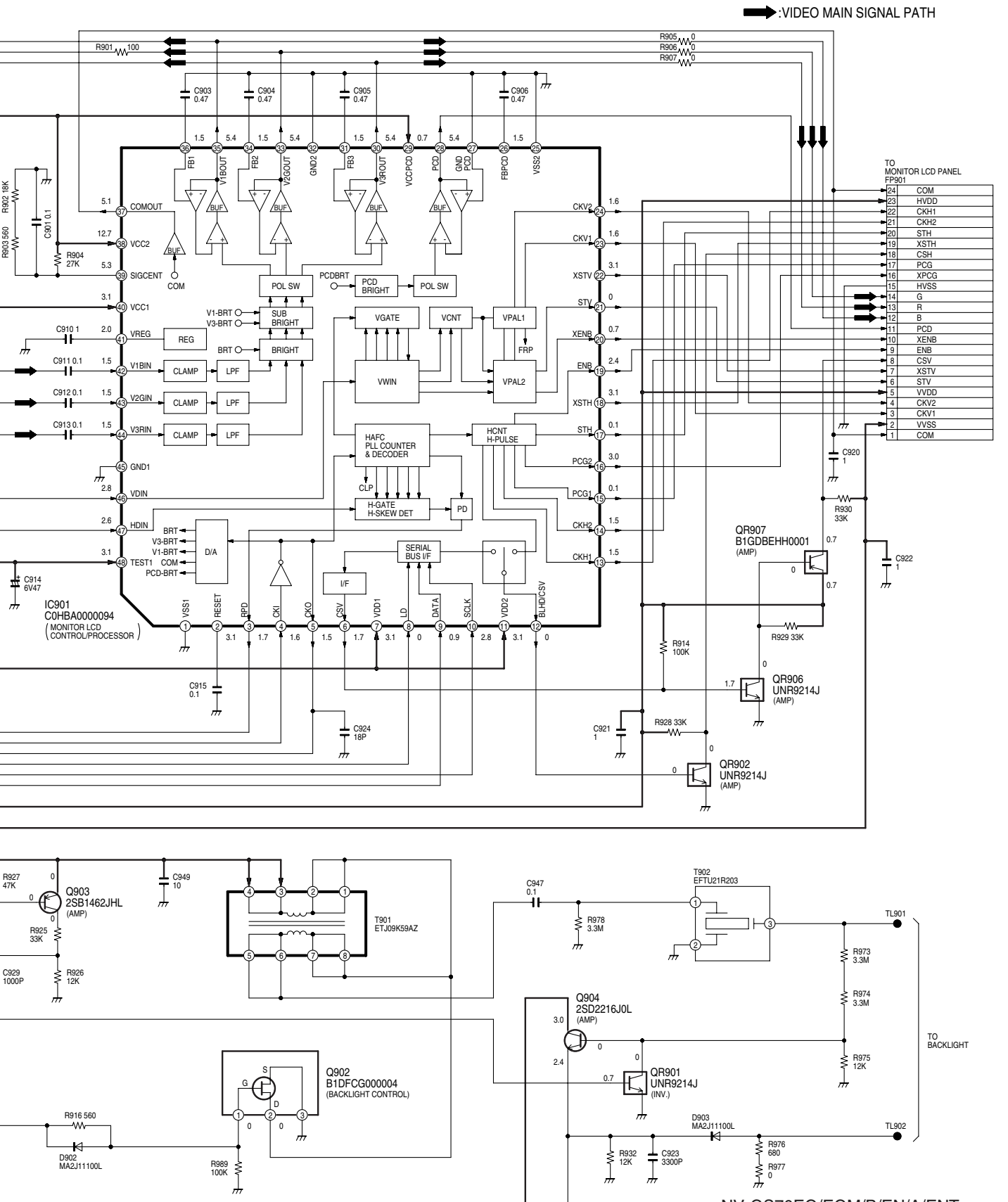


NV-GS70EG/EGM/B/EN/A/ENT
JACK SCHEMATIC DIAGRAM

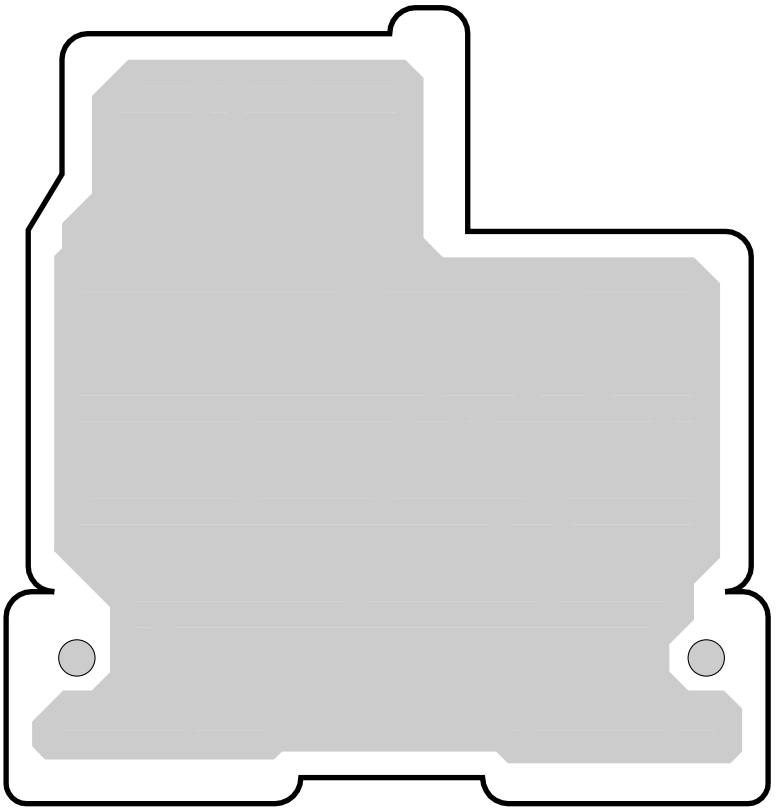
6 | 7 | 8 | 9 | 10 | 11

10.14. MONITOR/ HALL SENSOR FLEX. SCHEMATIC DIAGRAM

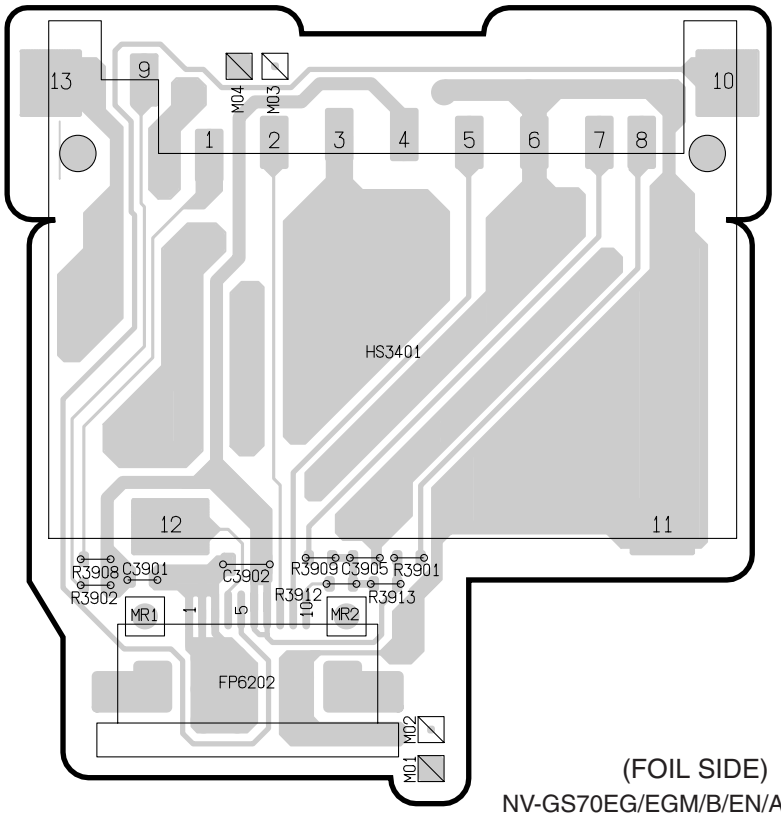



:VIDEO MAIN SIGNAL PATH
IC901
C0HBA0000094
(MONITOR LCD CONTROL/PROCESSOR)
TO MONITOR LCD PANEL FP901
QR907 B1GDBEHH0001 (AMP)
QR906 UNR9214J (AMP)
QR902 UNR9214J (AMP)
Q903 2SB1462JHL (AMP)
T901 ETJ09K59AZ
T902 EFTU21R203
Q904 2SD2216J0L (AMP)
Q902 B1DFCG000004 (BACKLIGHT CONTROL)
QR901 UNR9214J (INV.)
TO BACKLIGHT
NV-GS70EG/EGM/B/EN/A/ENT
MONITOR & HALL SENSOR FLEX.
SCHEMATIC DIAGRAM

(VEP001B0A)



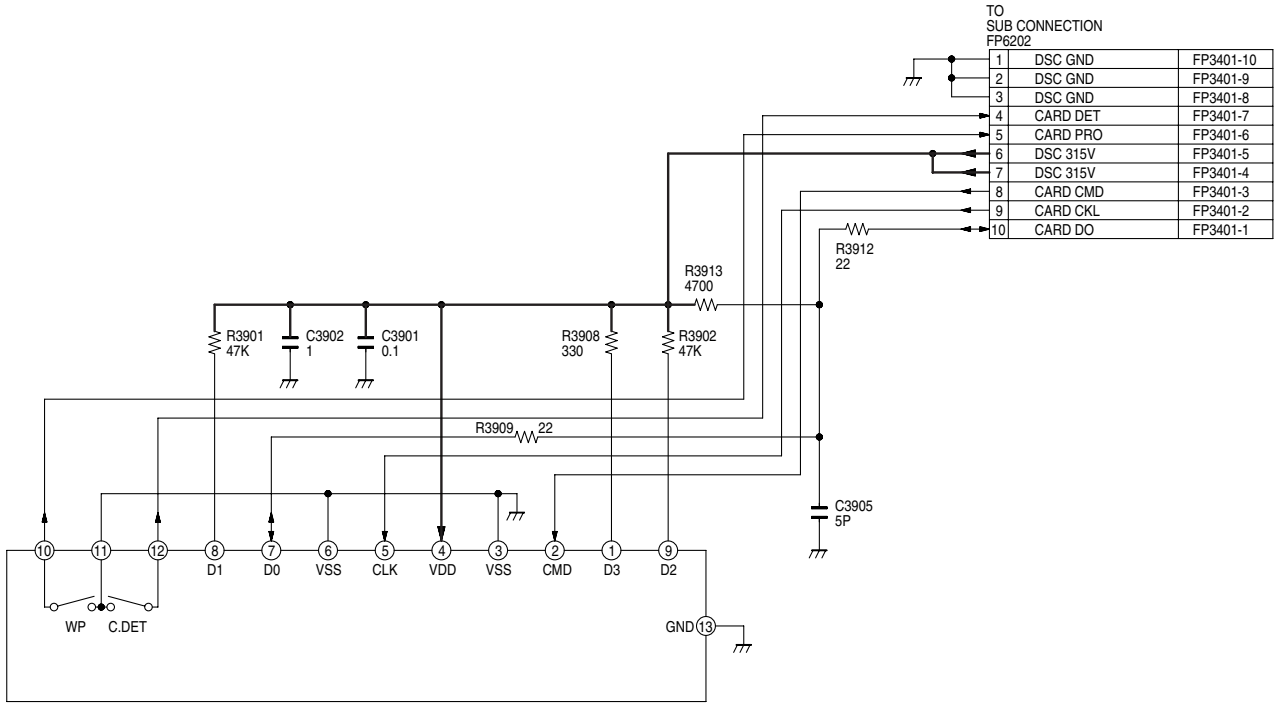
(COMPONENT SIDE)



(FOIL SIDE)

NV-GS70EG/EGM/B/EN/A/ENT
SD HOLDER C.B.A.

(SD HOLDER C.B.A.)



HS3401
K1NA09E00039

SD CARD CONNECTOR

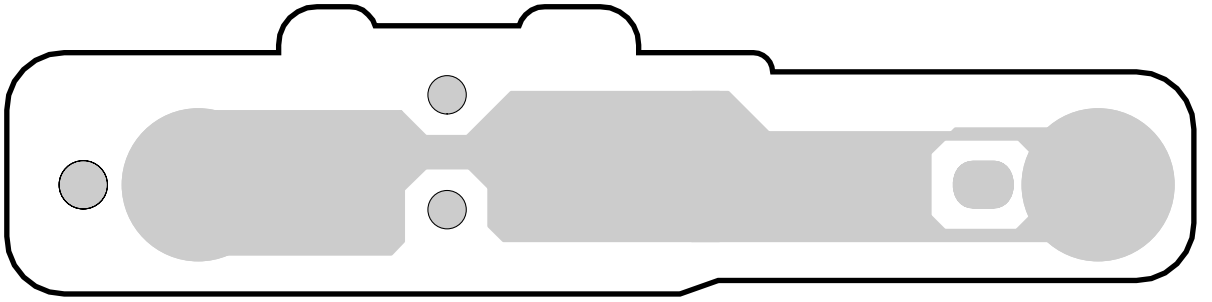
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-GS70EG/EGM/B/EN/A/ENT
SD HOLDER SCHEMATIC DIAGRAM

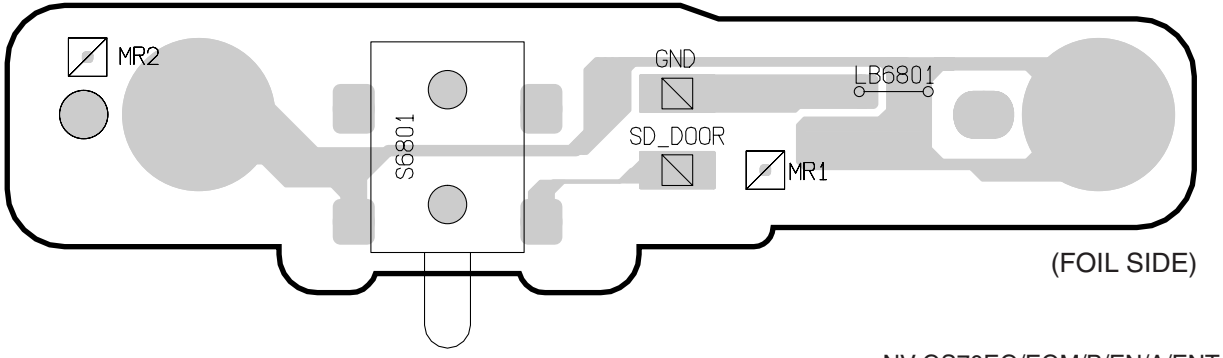
C
B
A

1 2 3 4

(VEP001B5A)



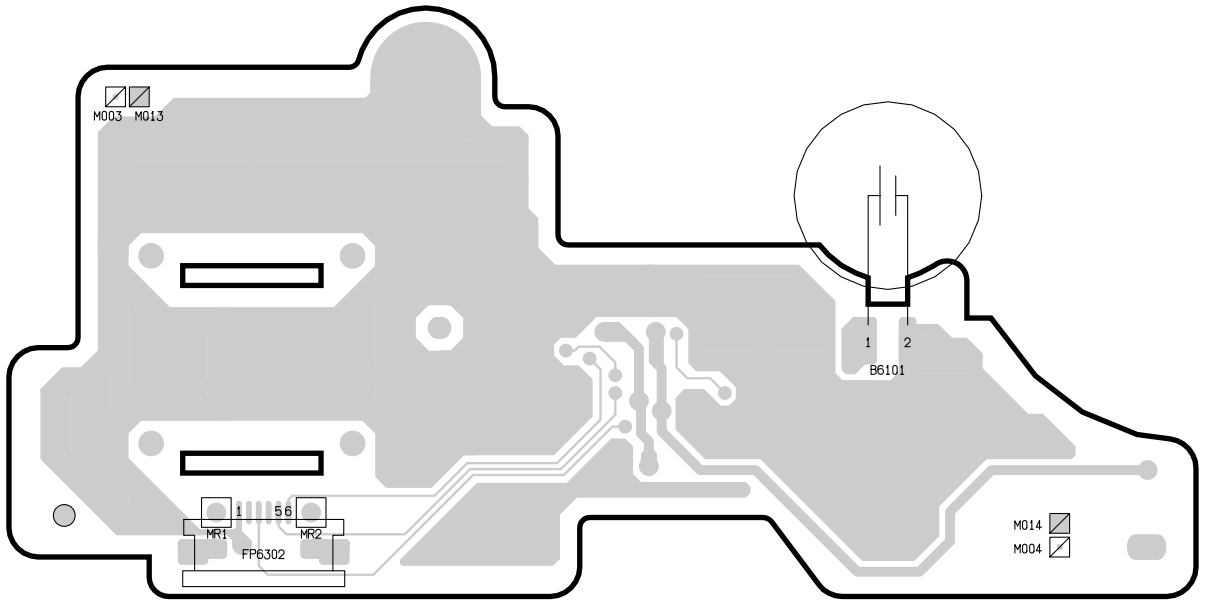
(COMPONENT SIDE)



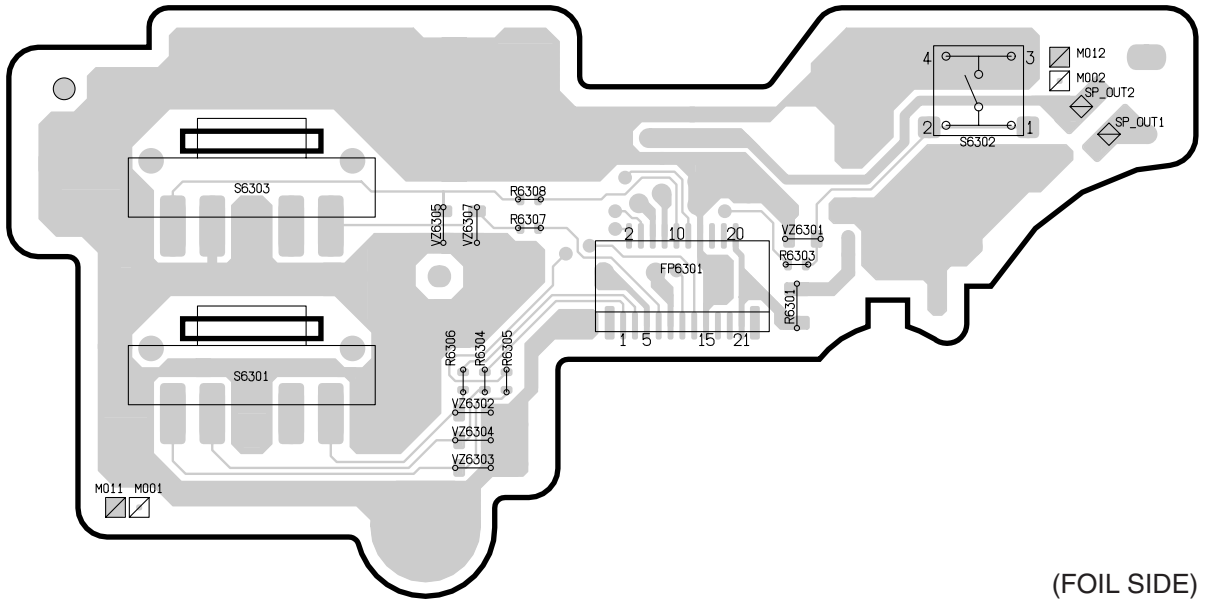
(FOIL SIDE)

NV-GS70EG/EGM/B/EN/A/ENT
SD OPEN C.B.A.

(VEP06F28A)



(COMPONENT SIDE)



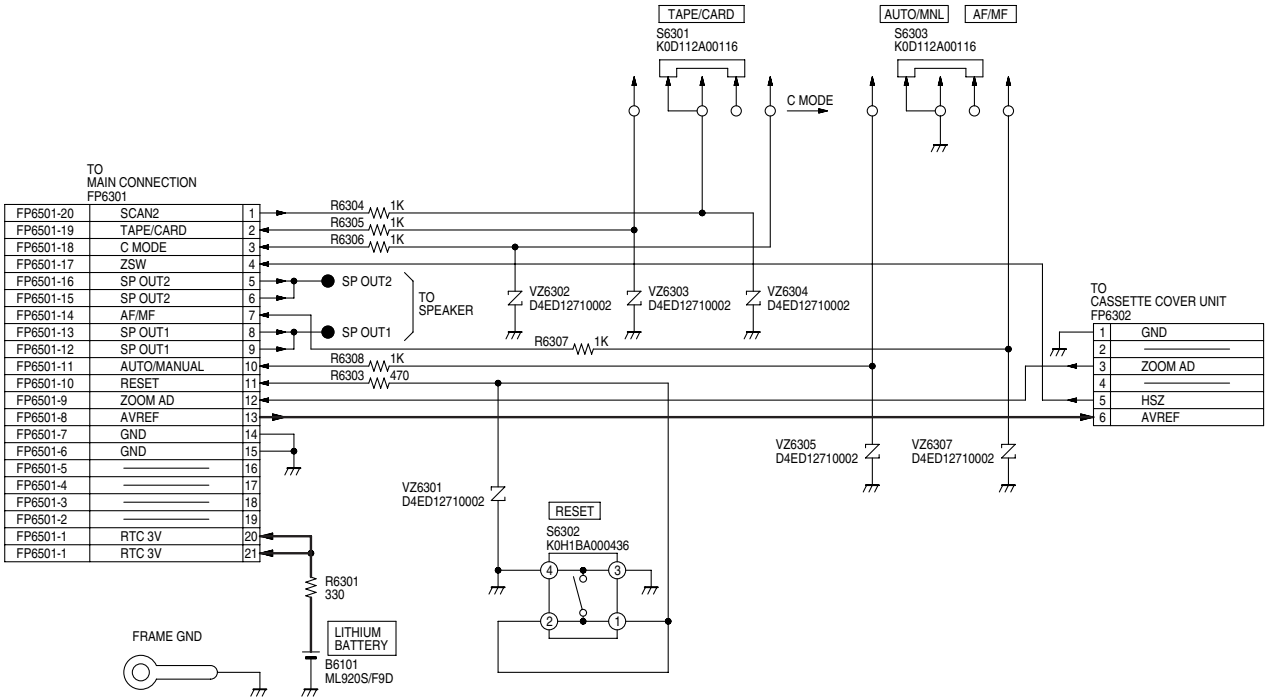
(FOIL SIDE)

NV-GS70EG/EGM/B/EN/A/ENT
SIDE (L) C.B.A.

A B C D E

1 2 3 4 5

(SIDE L C.B.A.)



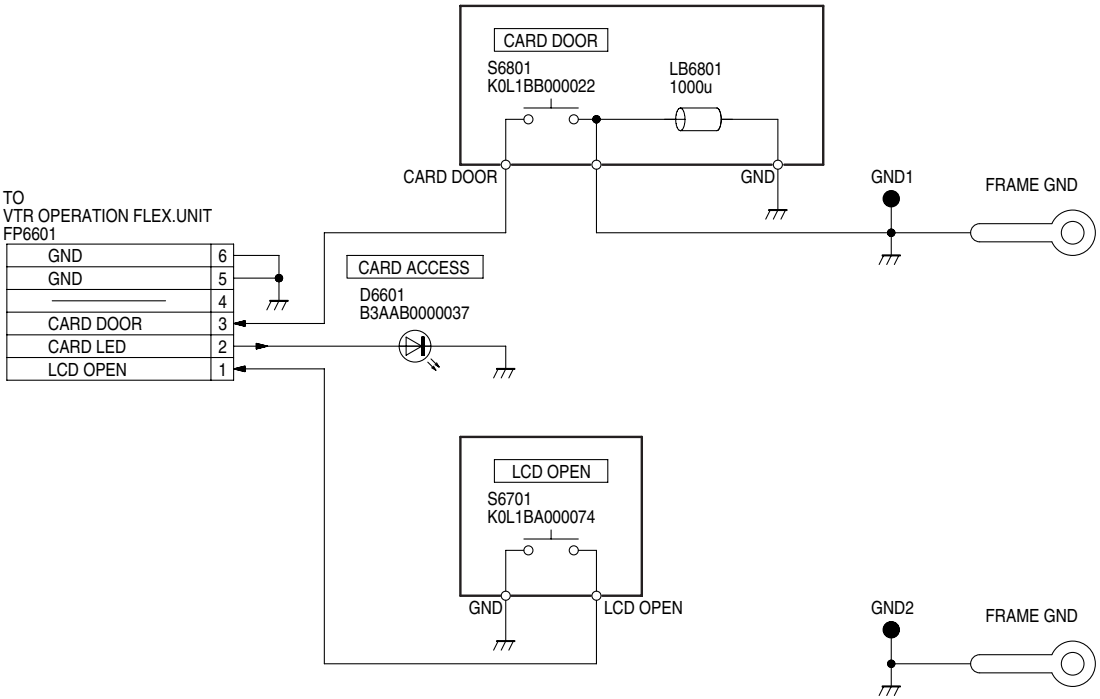
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-GS70EG/EGM/B/EN/A/ENT
SIDE(L) SCHEMATIC DIAGRAM

C B A

1 2 3 4 5

(SIDE R C.B.A.)



NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

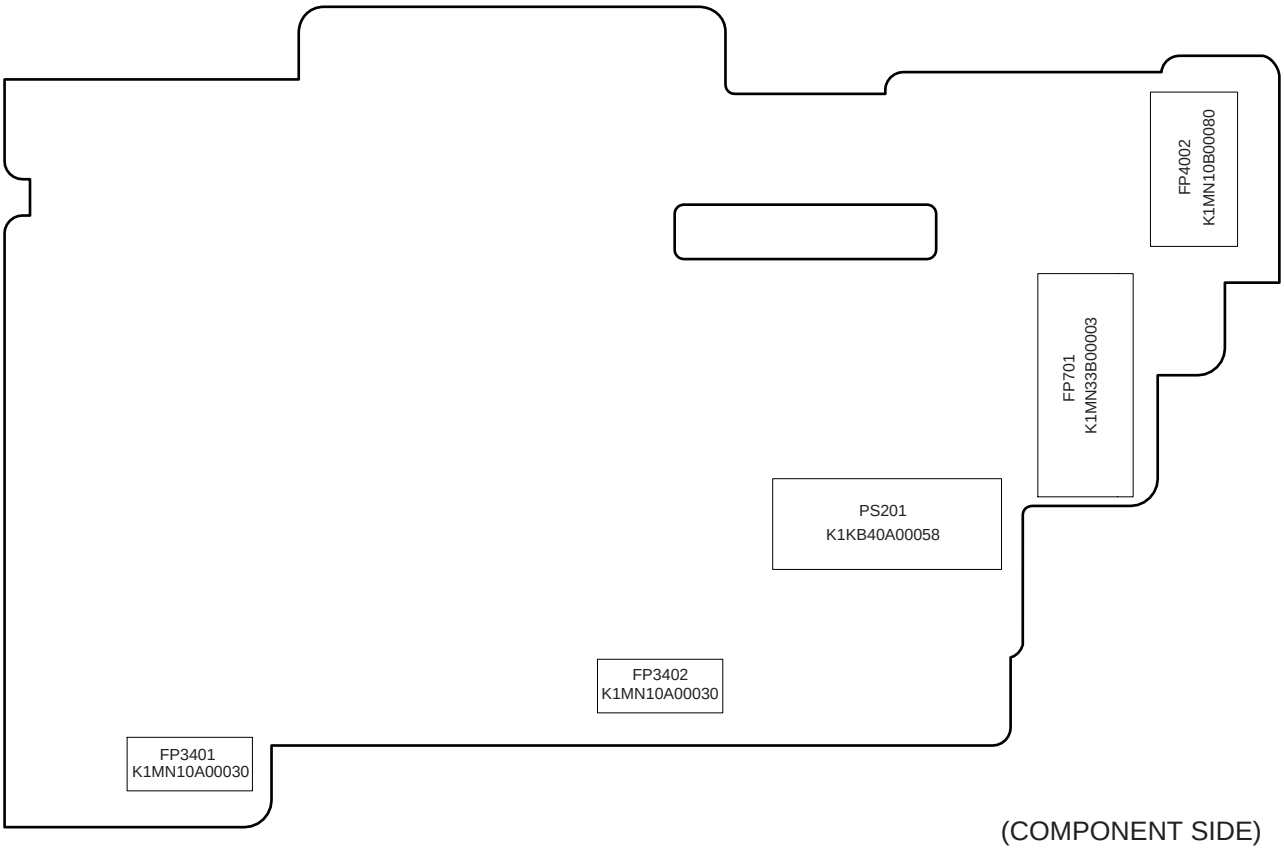
NV-GS70EG/EGM/B/EN/A/ENT
SIDE(R) SCHEMATIC DIAGRAM

B

A

1 2 3 4

(SUB C.B.A.)



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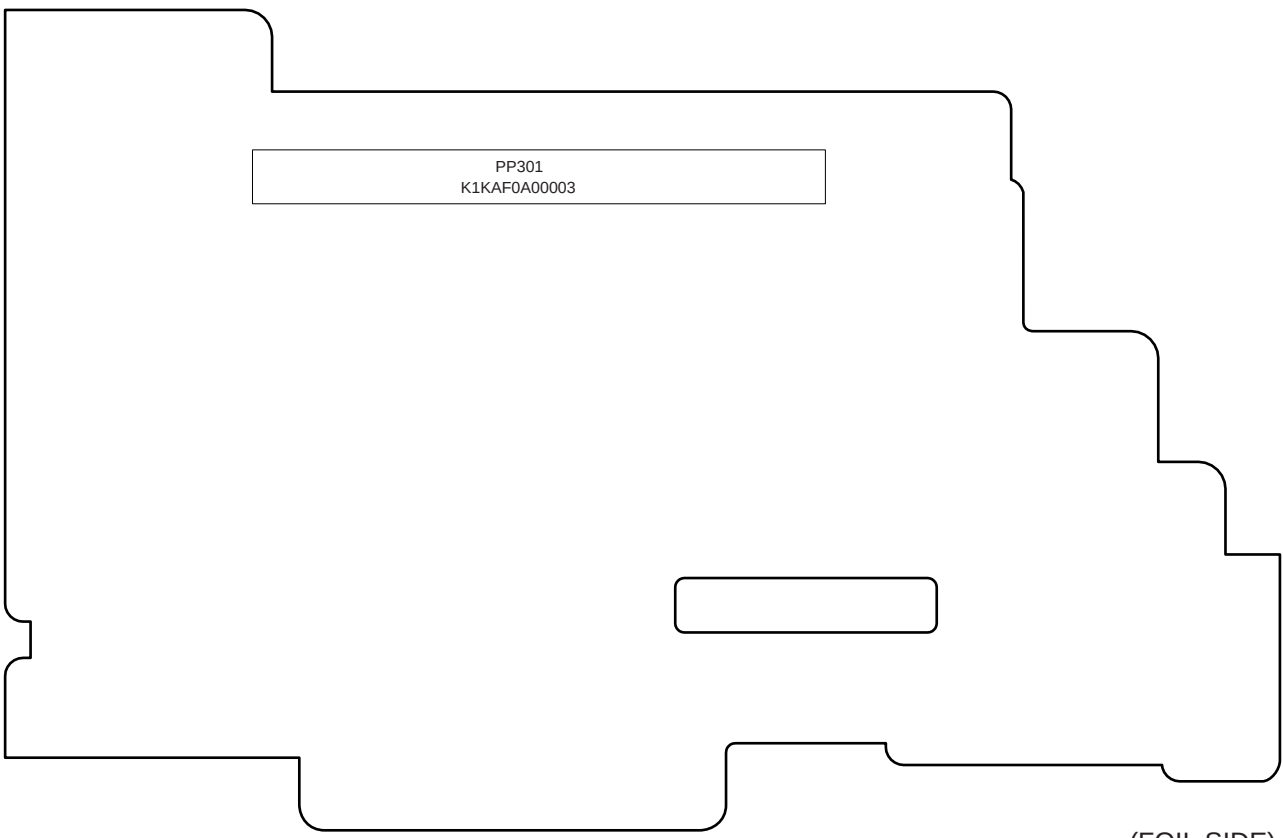
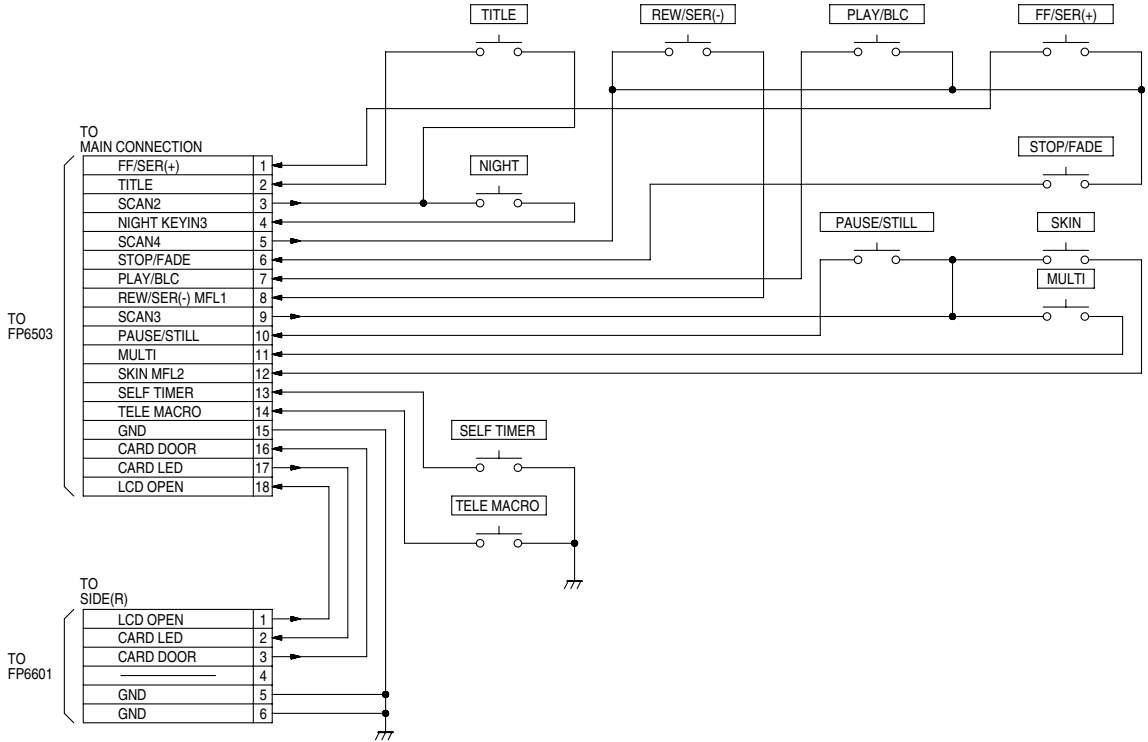


(FOIL SIDE)

(VTR OPEATION FLEX.UNIT)



NV-GS70EG/EGM/B/EN/A/ENT
VTR OPERATION FLEX.UNIT SCHEMATIC DIAGRAM

C
B
A

1 2 3 4

	INITIAL/LOGO	ABBREVIATIONS
A	A GND	Analogue GND
	A HASW	Audio Head Amp Switching Pulse
	A HSW	Audio Switching Pulse
	A MUTE	Audio Mute
	A ORP	Audio Overlap Pulse
	A. TR	Auto Tracking
	A0-8, 0-17	Memory Address
	A3V2	AD Converter Reference Voltage
	AB0-4	Address Bus
	AB0-4, AB12-15	Address Bus Line 0-4, 12-15
	ABSF	Focus Encoder Input
	ACI	Analogue Channel Cording IC
	AD	AD Converter
	AD	Auto Date, Analogue Digital Converter
	AD CLK	AD Clock
	AD REC	Audio Delayed REC
	AD0-6	Address
	AD0-6, ADR0-6	Address Data Line
	ADCLK	Analogue Digital Converter Clock
	ADCNT	Analogue Digital Control
	ADCS	Analogue Digital Chip Select
	A-DET	Audio Detect
	ADREC	Audio Delaied Rec
	ADUB	Audio Dubbing
	AE	Auto Expose
	AECNT	Auto Expose Control
	AEE(H)	Audio E-E (H)
	AEH	Audio Erase Head
	AEIRQ	Auto Expose Interrupt Request
	AF/MF	Auto Focus/Manual Focus
	AF DIS CS	AF DIS Chip Select
	A-FADE(L)	Audio Fade (L)
	AF-AMP	AF HALL Bias
	AFCS	Auto Focus Chip Select
	AFRP	Audio PLL Voltage Control
	AF-VN	Zoom Encoder V-Ref (–)
	AF-VP	Zoom Encoder VREF (+)
	AGC	Automatic Gain Control
	AGCCNT	Automatic Gain Control Control
	AGND	Analogue Ground/Audio Ground
	AGS	Anti Ground Shooting
	AH(P) / (R)	Audio Head (Play) / (Record)
	AHASW	Audio Head Amp Switch Pulse
	AHSW	Audio Head Switch Pulse
	AI, AO	Buffer Input, Output
	AIBCK	Bit Clock (to A/D Converter)
	AIDAT	Serial Data (to A/D Converter)
	AILRCK	L/R Clock (to A/D Converter)
	AIMCK	Master Clock (to A/D Converter)
	ALC CNT	Auto Level Control Control
	ALC MAIN	Auto Level Control Drive
	ALE	Address Latch Enable
	A-LOCK	Full Auto Switch
	A-MUT(H)	Audio Mute (H)
	ANLPTH	Analogue Loop Through High
	AORP	Audio Overlap Pulse
	APCNT	Aperture Control
	APS	Auto Power Save
	ART VH	Artifical Vertical Sync
	AT CNT	Automatic Tracking Gain Adjust
	ATF	Automatic Track Finding
	ATFCLK	41.85MHz Clock
	ATFG	Auto Track Gain
	ATL	Auto Lock Select
	ATN	Absolute Track Number
	ATR OFF(H)	Auto Tracking Off (H)
	ATV	Advanced TV
	AUDIO(N)	Audio (Normal)
	AUX	Auxiliary
	AVDD	Analogue VDD
	AVSS	Analogue Ground
	AWTB	Auto White Balance B-Y
	AWTR	Auto White Balance R-Y
B	BACK	Back-up
	BACK UP	Microcomputer Back-up
	BACK VDD	Back-up Power
	BATT	Battery
	BATT ALARM	Battery Alarm
	BATT REF	Reference Voltage for Battery
	BCB	B Carrier Balance
	BCBM(B-Y)	B-Y Carrier Balance
	BCBM(R-Y)	R-Y Carrier Balance
	BD0-7	REC/Play In/Out Buss
	BDCK	Standard Bus Data Clock (9MHz)
	BDEN	Standard Bus Data Enable
	BEND	Data Block End Request
	BF	Burst Flag Pulse
	BFA	Burst Flag Pulse for Encorder
	BFO/BFI	Burst Flug Input/Output
	BI, BO	Buffer Input, Output
	BL	Back Light
	BL ON	Back Light ON (L)
	BL4V	Back Light 4V
	BLC 0, 1	Back Light Y Control Out, In
	BLDI/O	Back Light Drive Input/Output
	BLK	Blanking Pulse
	BLKA	Blanking for Encorder
	BLKA	Blanking Pulse for Encorder
	BLKI/O	Blanking Pulse In/Out

	INITIAL/LOGO	ABBREVIATIONS
	BLKZ	Blanking Pulse for Zoom Encorder
	BM	Balance Modulator
	BQUIET	Bus Out Control Signal
	BUF IN/OUT	Buffer In/Out
	B-Y KB	B-Y Carrier Balance
	B-YO	B-Y Signal Out
C	C A In/Out	Pre-Aperture In/Out
	CAPSTP	Capstan Stop Flag
	C CNT	Colour Control
	C SYNC	Composite Sync Signal
	C/N	Carrier/Noise
	C0-7, C00-07	Chrominance Signal 0-7
	CAGAIN	Aperture Gain Control
	CAM	Camera
	CAM CLK	Camera Clock
	CAM RST	Camera Reset
	CAM SIOC	Camera Serial In/Out Contol
	CAM T	Camera Test
	CAM TL	Capstan Trque Limit
	CAP EC	Capstan Trque Control
	CAP P(H)	Capstan Power On (H)
	CAP R/F/S	Capstan Reverse (H)/Stop (M)/Forward (L)
	CAP SW	Capstan Power Control Switch
	CAPSTP H	Capstan Stop Flag (Stop High)
	CAPVM	Capstan Motor Current
	CAPVS	Capstan Motor Power Control Switch
	CAS	Compresion, Audio Process, Shuffling/Deshuffling
	CAS	Memory Address Strobe (Active Low)
	CASDOWN, DWN	Cassette Down (L)
	CB, CR	Chroma B, Chroma R
	CBLK	Composite Blanking Pulse
	CC	Channel Cording
	CCA	Curent Drive Control
	CCA	Current Control Amp
	CCD	Charge Coupled Devise
	CCW	Counterclockwise
	CD SP0-7	Digital Chroma
	CDS	Correlate Double Sampling Signal
	CDS1, 2	Sampling Pulse for CCD Output Signal
	CE	Chip Enable
	CE	Control Pulse Erase
	CEC	Capstan Error Code
	C-ERA(H)	Control Erase (H)
	CFEM	Chrominance Memory Signal
	CFM	Chrominance Field Memory
	CFM1-4	Chroma Field Memory Signal
	CG CLK	Character Generator Clock
	CG CLK DATA	Clock Generator Data
	CG DATA	Character Generator Data
	CGC	Chrominance Gain Control
	CGCS	Character Generator Chip Select
	CGO	Character Generator Serial Data
	CH	Charge

	INITIAL/LOGO	ABBREVIATIONS
	CH1	Channel 1 (Odd Field)
	CHR	Character
	CHR BACK	Character Back-up
	CHR MIX	Character Mix
	CI, CO	Buffer In/Out
	CI,CO	Buffer Input & Output
	CIF	Control Signal Forward Input
	CIF, CIR	Positive Control Pulse, Negative Control Pulse
	CIR	Control Signal Reverse Input
	CK	Clock
	CL/CLK	Clock
	CLASS	Classeffication Signal for Compress (DCT/VLC)
	CLASS 0.1	Class Control Signal Durring DCT/VLC
	CLK135	13.5MHz System Clock
	CLK18	18MHz System Clock
	CLK2	Clock 2 (824XFH: 12.875MHz)
	CLK246	24.576MHz Clock
	CLK27	27MHz System Clock
	CLK450	450KHz Clock
	CLKDCLK	Digital Clock
	CLK-PH	Clock Phase Control
	CLK-REF	Reference Clock
	CLP-RST-H	Clamp Reset High Signal
	CLX	TFT X-axis Transmission Clock
	CLX, CLX1-4	Shift Clock for X Direction (LCD Panel)
	CLY	Shift Clock for Y Direction (LCD Panel)
	CLY	TFT Y-axis Transmission Clock
	CLY FG	Cylinder FG Signal
	CMEMO0-3	Chroma Memory Output Signal 0-3
	CMIX	Character Mix
	CMO	Chrominance Memory Output
	COMPC	Position Detection Pulse
	COM RDY	Serial Enable Signal
	CMODE	Camera Mode
	CNCLK	Clock
	CNR	Chrominance Noise Reduction
	CNT, CONT	Control
	CO	Control Out
	CO0-7	Chrominance Output 0 to 7 (Digital)
	COM	Common
	COM RDY	Serial Transmission Enable
	COMB	Comb Filter
	COS EQ	Cosin Equalizer
	CP	Clamp Pulse
	CP ON(H)	Camera Power On(H)
	CP2, 20	Clamp Pulse
	CP2A, CP2O	Encoder Clamp Pulse
	CPN	Component Signal
	CPOB	Clamp Pulse for Optical Blanking
	CPS	Composite Signal
	CPV	Gate Scan Clock
	CR OUT	Pre Apature Out
	CR POW SW	Camera Remote Power On Switch
	CRA	Aperture Gain Control

	INITIAL/LOGO	ABBREVIATIONS
	CRA	Pre Apature Gain Control
	CRST	Camera Reset
	CS	Chip Select
	CS 0-7	Chrominance Signal Out 0-7
	CSEL	Clock Phase Select
	CSI 0-7	Chrominance Signal In 0-7
	CTSW	Crosstalk Switch
	CURR	Current
	CW	Clockwise
	CYL EC	Cylinder Motor Trque Control
	CYL PG	Cylinder Motor PG
	CYL VM	Cylinder Motor Current or Power
D	D CLK	Digital Clock
	D MODE	Digital Mode Switch Signal
	D01-03	Zoom 01-03
	DA UV SEL	D/A Convertor U/V Select
	DAC	Digital Analogue Converter
	DAG	Digital Analogue Ground
	DB0-7	Data 0-7
	DB0-7	Microprocessor Data
	DCC	DC Clamp Control
	DCCNT	DC Control
	DCI	Digital Channel Cording IC
	DCLR	Digital Clear
	DCP	Digital Clamp Pulse
	DCS-CLK, DA	CAS & DV I/F Serial Clock
	DC-STP1	DCS Serial Start
	DC-STP2	DCS Serial Stop
	DCT	Discrete Cosine Transform (Compression)
	DCX7	Serial Data
	DEDP 0-3	Playback Data
	DEDR 0-3	Rec Data
	DEMO	Demodulation
	DEMP	A/D Convertor Empahsis Control
	DEMP	De-Emphasis
	DFD 0-7	Encode Data In/Out Between Shaffling Memory
	DFD0-7	Encode Input/Output Signal for Shuffling Memory
	DIBDCK	Bit Clock
	DICLK	Digital Clock
	DIDAT	Serial Data
	DIDAT	Serial Data Durring Digital Audio In
	DIF	Digital Interface
	DILRCK	L/R Clock
	DILRCK	Serial Clock Durring Digital Audio In
	DIMCK	Master Clock
	DIMCK	Mater Clock Durring Digital Audio In
	DIO 1-8	Data In/Out
	DIOS	Data In/Out Select Control Signal
	DIOS	Select Signal for Digital In/Out
	DIS	Digital Image Stabilizer
	DIS R/B	Digital Image Stabilizer Read (H)/Busy (L)
	DIS R/B	DIS IC Rady/Busy
	DIS/KAND	Digital Image Stabilizer/Sensitivity
	DISCS	Dis Chip Select
	DISP	Display
	DL	Delay Line
	DOBCK	Audio A/D Convertor Bit Clock
	DOCTL	Data Output Control Signal
	DODAT	Serial Data (to D/A Converter)
	DOLRCK	Audio A/D Converter LR Clock
	DOLRCK	L/R Clock (to D/A Converter)
	DOMCK	Audio A/D Converter Master Clock
	DOMCK	Master Clock (to D/A Converter)
	DQ 1-16	Memory Data
	DRAM CAS	D-RAM Colum Address Strobe
	DRAM OE	D-RAM Out Enable
	DRAM RAS	D-RAM Read Address Strobe
	DREC	AV Delayed REC Start Pulse
	DRK	Dark (LPF Switch for Auto Focus)
	DS1, 2	Double Sampling Pulse
	DSF 0-7	Data In/Out for Shaffling Memory
	DSF 0-7	Input/Output Data to Shuffling Memory (18MHz)
	DSP	Digital Signal Processor
	DSP R/B	DSP IC Rady/Busy
	DSP-48K-H	DSP IC Clock Select
	DSTB	Data Stobe Signal
	DSV	Digital Sum Variation
	DV	Digital Video
	DVB	Digital Video Broadcast
	DVC	Digital Video Cassette
	DVDD	Digital VDD
	DVIO	Digital Video Input Output
	DVSS	Digital Ground
	DX	Shift Data for X Direction (for LCD)
	DY	Shift Data for Y Direction (for LCD)
	DY	TFT Y-axis Shift Data
	DZ	Digital Zoom
E	E Snap	Electric Snap Shot
	E ZM	Electric Zoom
	E2 CS or E2P CS	EEPROM Chip Select
	E2 R/B	EEPROM Rady/Busy
	E2P	EEPROM
	EARP	Earphone
	EC	Torque Control
	ECC	Error Correction Cording
	ECM	Electric Condencer Mic
	ECR	Reference Voltage for Capstan Torque
	EDA	Error Correction, DCI, ATF Servo
	EE CS	EEPROM Chip Select
	EE R/B	EEPROM Read (H)/Busy (L)
	EEPROM	Electric Erasable Programable Read Only Memory
	EIS	Electric Image Stabilizer (DIS)
	EMP	A/D Convertor Emphasis Control
	ENAB	Enable
	ENV	Enverope
	EOB	End of Block

	INITIAL/LOGO	ABBREVIATIONS
	EQ	Equalizer
	EVF	Electric View Finder
	EXT DC	External DC (AC Adaptor)
	EXT DC(H)	AC Adaptor DC (H)
	EXT NOREG	AC Adaptor 6V
	EXT S DATA	Serial Data for Edit
	EXT SCK	Serial Clock for Edit
	EZOOM	Electric Zoom
F		
	F ENC	Lens F-Value
	FACT MODE	Factry Mode (not used in the service)
	FB	Feed Back
	FC	Saw Tooth Signal In
	FCK	Clock
	FCO	Saw Tooth Signal Generator
	FENC	Focus Encoder
	FEND	Frame End Pulse
	FH2B	FH/2 (15.625KHz / 2=7.8125KHz)
	FIX OSD	Auto Tracking Off (H)
	FLICK	Flicker Output
	FM	Field Memory
	FM0-7	Field Memory 0-7
	FMCO0-3	Field Memory Chrominance Out 0-4
	FMDIR	Focus Motor Direction
	FMOEM	Field Memory Enable
	FMOEO	Field Memory Enable
	FMT1-4	Focus Motor Terminal 1-4
	FMY00-07	Field Memory Luminance Out 0-7
	FMYI0-07	Field Memory Luminance In 0-7
	FNO	F Value
	FPS	Frame Refference Signal
	FR	Capstan Reverse High
	FRP	Frame Refference Pulse
	FRPSO	Frame Start Pulse
G	G1, G2, G3	Gap 1, 2 and 3
	GCA	Gain Control AMP
	GCNT	Gain Control
	G-CNT	AGC Adjustment
	GCTRL	Gain Control
	GENE	Generator
	GF	FG AMP Terminal
	GSW	Ground for Switching Power
H	H/M/N	Hi-Fi / Mix / Normal
	H/N	Hi-Fi / Normal
	H1, 2	H. CCD Drive Pulse
	HAP	Horizontal Aperture
	HASW	Head AMP Switching Pulse
	HB	Hall Bias
	HBR SET	High Brightness Set
	HBRST	High Brightness Set
	HCLR	High Clear
	HCP	Shift Clock for Horizontal Drive

	INITIAL/LOGO	ABBREVIATIONS
	HD	Horizontal Drive Pulse
	HDTV	High Definition TV
	HEX	Hexadecimal
	HG	Hall Gain
	HID	Head Switching Pulse
	HLT	High Bright Signal
	HALL IN(+), (–)	Input Signal from Hall IC
	HP	Headphone
	HPF	High Pass Filter
	HSE	Modulated Data Output
	HSP	Timing Pulse for Shaffling Memory
	HSS	Horizontal Sync Signal
	HSW	Head Switching Pulse
	HS-WT	High Speed Zoom
	HSZ	High Speed Zoom
I	I/F	Interface
	I-2 C	Inter Integrated Circuit
	ID(H)	Wide Television (H)
	IMP	Inter Microprocessor Protocol
	INF	CCD Input Signal 1
	INF	Input Frame Signal
	INS	CCD Input SIgnal 2
	INTER	Interval Recording
	INV	Inverter
	IOU	R-Y Analogue Signal Output
	IOV	B-Y Analogue Signal Output
	IOY	Y Analogue Signal Output
	IR	Infrared Rays
	IRDET	Imfrared Ray Detection
	IREF	Current Adjustment Terminal
	IRIS/SH	Iris / Shutter Control
	IRQ	Interrupt Request
	ITI	Insert & Track Information
J	JPEG	Joint Photographic Image Cording Experts Group
K	KANDO	Digital Gain Up
	KB	Carrier Balance
	KEY IN	Key Scan
	KND	Digital Gain Up
	KNEE	Luminance Compensate
L	LCD	Liquid Crystal Display
	LCD P(L)	LCD Power On (L)
	LD	Load Pulse
	LDD	Liquid Direct Drive
	LEDCNT	LED Control
	LI-BATT	Lithium Battery
	LOAD	Loading
	LOAD F, R	Loading Direction (F: Forward / R: Reverse)
	LPF	Low Pass Filter
	LRMONO	Monoral Audio (L + R)
	LSB	Least Significant Bit

INITIAL/LOGO		ABBREVIATIONS
	LVL	LPF Switch for Auto Focus
M	M1-3	Motor Coil Terminal 1 to 3
	MA0-5	Microprocessor Address Data 0-5
	Mbps	Megahertz Bit Per Second
	MD	Modulation
	MD0-7	Microprocessor Data 0-7
	MDT0-7	Microprocessor Data 0-7
	ME (TAPE)	Metal Evaporated (Tape)
	MENB	Focus Motor Enable
	MFF	Manual Focus Far
	MFN	Manual Focus Near
	MHSYNC	Monitor Horizontal Sync Signal
	MIC	Memory In Cassette
	MIG	Meta In Gap
	MIX N.R.D.	Non Rec Data Mix
	MOD	Modulation
	MOUT	Mic Out
	MP (TAPE)	Metal Particle (Tape)
	MPEG	Moving Picture Image Cording Experts Group
	MPEG2	Moving Picture Image Cording Experts Group Phase 2
	MRST	Focus Motor Reset
	MSB	Most Signal Bit
	MVSYNC	Monitor Vertical Sync Signal
N	N/F	Near/Far Focus
	N/P	NTSC/PAL
	NB1-3	Base for NPN Transistor
	NC	No Connection
	NC1-3	Corrector of NPN Transistor
	NCLR	Power On Reset
	NCP1	Clamp Pulse
	NCP2+VDH	Clamp Pulse + Horizontal Drive Pulse
	NCP2+VDM	Clamp Pulse + Gate Pulse
	NDE	Non Liner De-Emphasis
	NE	Emitor of NPN Transistor
	NLE	Non Liner Emphasis
	NR	Noise Reduction
	NRD	Non Rec Data
	NRD BLK	Non Rec Data Blanking
	NRD CLK	No Rec Data Clock
	NRE	Read Enable Input (Low Active)
	NWE	Write Enable (Low Active)
O	OB	Optical Black
	OBCNT	Optical Black Control
	OBREF	Reference Voltage for Optical Black Control
	OE	Output Enable
	OFH	Horizontal Counted Down Clock Signal (Reference)
	OFS	Offset
	OP	Operation AMP Output
	OSD	ON Screen Display
	OVL	Overlap Pulse
	OZ	Optical Zoom

INITIAL/LOGO		ABBREVIATIONS
P	P SW	Power Switch
	PB1-3	PNP Base 1-3
	PBCTL	Play Back Control
	PBCTL	Pre-Branking Control
	PBH	Head Amp Switch
	PBLK	Pre-Blanking (Pulse)
	PC1-3	Corrector of PNP Transistor
	PCBM	Carrier Balance
	PCH	Phase Compensator (Hall AMP)
	PCI	Phase Compensator (Current)
	PCO	Phase Compensator Out
	PCS	Switching Power Control
	PCV	Phase Compensator (Voltage)
	PE	Emitter of PNP Transistor
	PED	Pedestal
	PEDECNT	Pedestal Control
	PENO	Alarm (L)
	PFP	Pilot Frame Position
	PGA, B	Power Ground A, B
	PGC	Pulse Generator Comparator
	PGI	Pulse Generator Input
	PGMM	Pulse Generator Monostable Multivibrator
	PGO	Output of Pulse Generator AMP
	PMODE	Select Signal for Normal / Wide Screen
	PON	Power On
	POR	Power On Reset
	POSCOM	Common Position
	PREAMP	Pre-AMP
	PREBLK	Pre-Blanking
	PT	Protect for V Voltage
	PWM	Pulse Width Modulation
	PWMB	Pulse Width Modulation Pulse
Q	Q2H	Source Output Select
R	R CTL P	Recorded Control Pulse (+)
	R CTL R	Recorded Control Pulse (–)
	R/B	Read/Busy
	R/L	Direction Control for Data Transmition
	RA	Recording AMP
	RA1	Rec AMP 1
	RAC AC	Rec Audio Current
	RAD	Read Address Data
	RAE	Read Address Enable
	RB	Read Busy
	R-B	R Bias
	RCB	R Carrier Balance
	RE	Read Enable
	RE(F), (S)	Rotary Erase Head Transformer
	REB	R Bias
	REC CC	Rec Current Control
	REC CCNT	Rec Current Control
	RECCTRL	Recording Control Pulse
	RECI	Rec Amp Switch